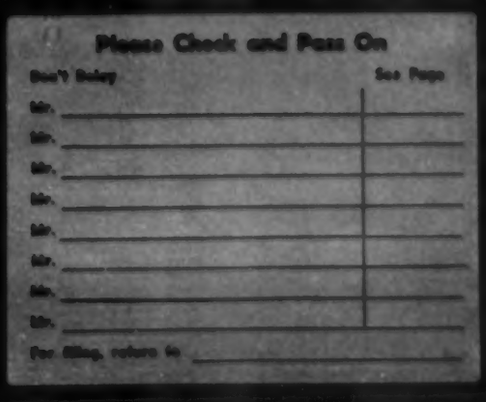
PRINTING EQUIPMENT *Engineer*

MARCH 1956

An Industry-Wide Technical Publication

Plant Planning and Improvement Issue



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that have made the **Selectro-Matic** Quadder *a leader!*

FIRST . . . with the "outboard" quadder.

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FIRST . . . outboard quadder to offer automatic quadding of short lines

FIRST . . . with one shift installation

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3372

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★ Precision TRADE ★ MARK Parts ★

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This is the Sta-Hi Master Matcher. Used in conjunction with the Sta-Hi Master Trimmer, it makes possible precise registration of newspaper stereotype mats, resulting in closely registered first press proofs of r.o.p. and other color printing. It saves valuable production time and expense!

STA-HI

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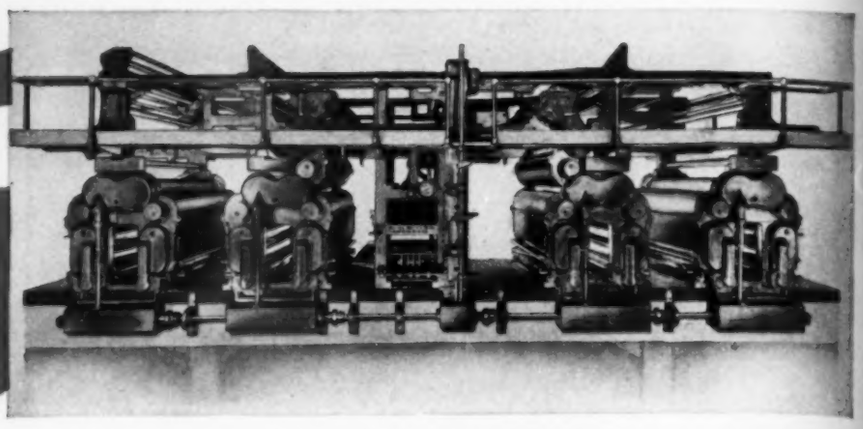
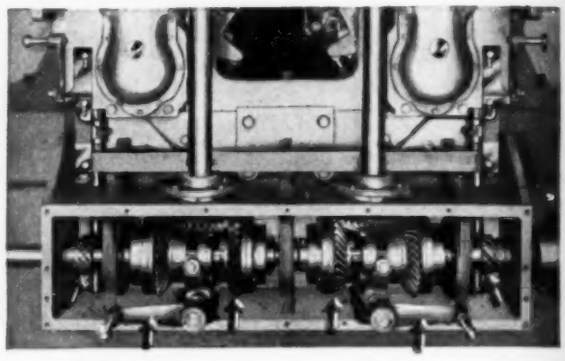
SPEAKING OF COLOR . . .



COLOR is best with the SCOTT "EXTRA HI-SPEED" PRESS



SCOTT Octuple Press with two extra color plate cylinders for spot color printing on outside and double center pages. Note the Double Reversing Drive — A throw of the clutch lever reverses cylinder rotation for color.

Each year, publishers, in increasing numbers, are making color facilities available to their advertisers.

SCOTT pioneered in the art of color printing. SCOTT printing equipment has demonstrated time and again its superior engineering and mechanical advantages. For example: it is unnecessary to change fountain gears or to open oil enclosures when rearrangement of color is required — to reverse your cylinder drive, simply move the lever outside the gear box to the desired position, "A Flick of the Lever!" Single and double reversing drives are available for all units.

All SCOTT gears remain in mesh permanently — hence, are always in perfect alignment — resulting in longer life and low cost maintenance.

Whether your needs be a standard press with reversible cylinders for color or superimposed color printing couples — consult SCOTT for technical and sound practical suggestions.

For spot or full color — SCOTT has the most effective and efficient color printing equipment. When making this all important capital investment — why accept less than the best?

Buy with CONFIDENCE - - - Buy SCOTT

WALTER SCOTT & CO., INC.

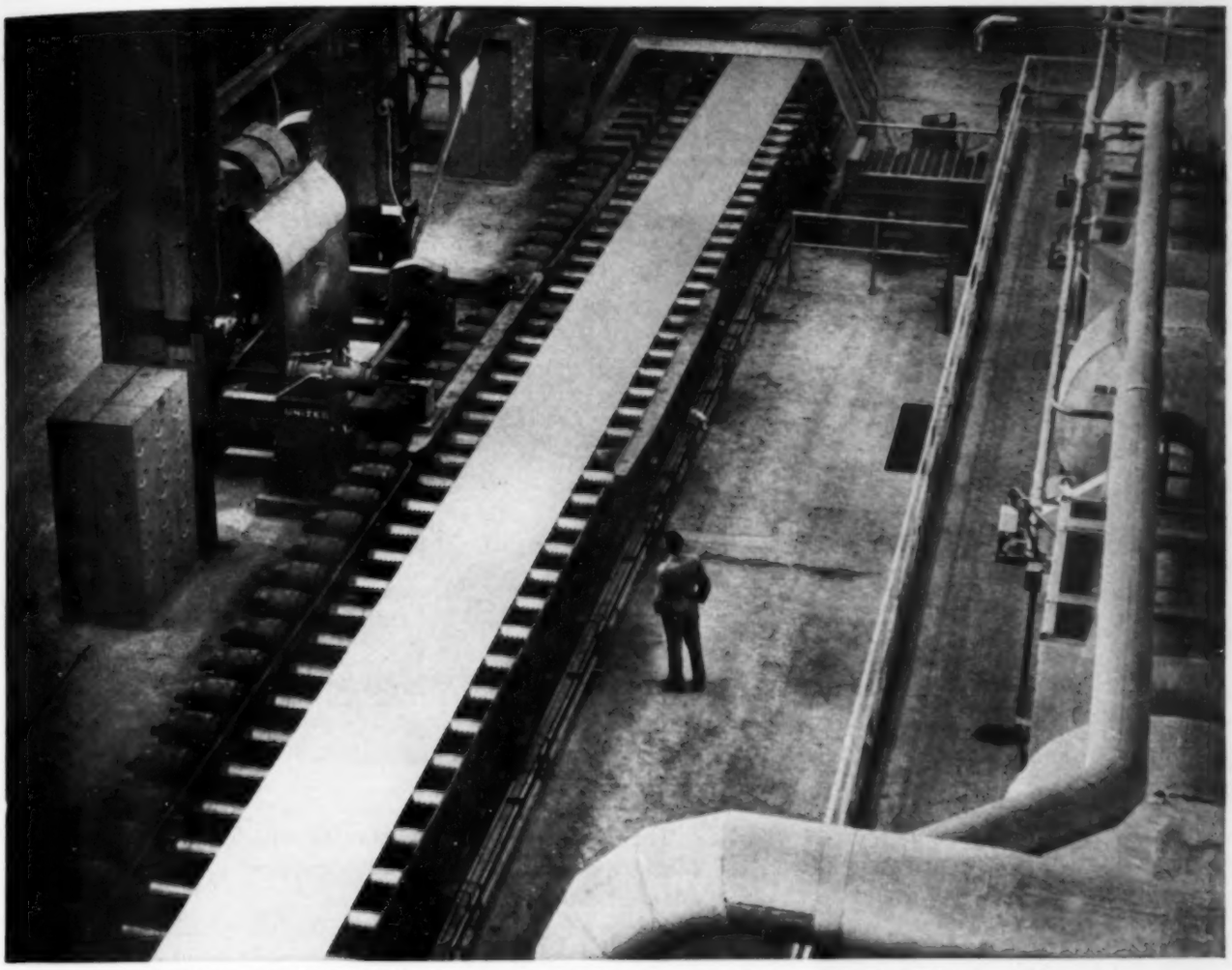
PLAINFIELD, NEW JERSEY

8-88-3

WRITE FOR THE NEW SCOTT COLOR PRESS BULLETIN

Made with MAGNESIUM for better reproduction

DOW



THIS NEW DOW ROLLING MILL is now producing magnesium photoengraving sheet in large quantity

PRODUCTION ROLLING FOR MAGNESIUM PLATES!

Economy, light weight and reproduction quality—
big reasons why this superior photoengraving metal is fast
gaining popularity with engravers and printers alike

Engravers like it. So do printers. That's why magnesium—a relatively new engraving metal—is now used for 25 to 30% of *all photoengraving* plates!

Economy, light weight and quality of reproduction have already been named as reasons for this extremely rapid growth. But there are several other reasons: Etchability and machinability are faster and easier with magnesium. Good dimensional stability ensures register. Then there's outstanding wearability—for direct printing, as well as molding of stereotype mats and electrotypes.

Getting back to light weight, magnesium is four times lighter than zinc . . . five times lighter than copper! Naturally, it's much easier to handle.

Consider the many benefits of magnesium photoengraving plate—for all concerned. Then consider its moderate price and ready availability. Chances are good you'll want to investigate this superior engraving metal for your own operation. Contact your local supplier of engraving metals or THE DOW CHEMICAL COMPANY, Magnesium Sales Department MA 383U, Midland, Michigan.

you can depend on DOW MAGNESIUM DOW

THE INDIANAPOLIS STAR
THE SPOKESMAN-REVIEW
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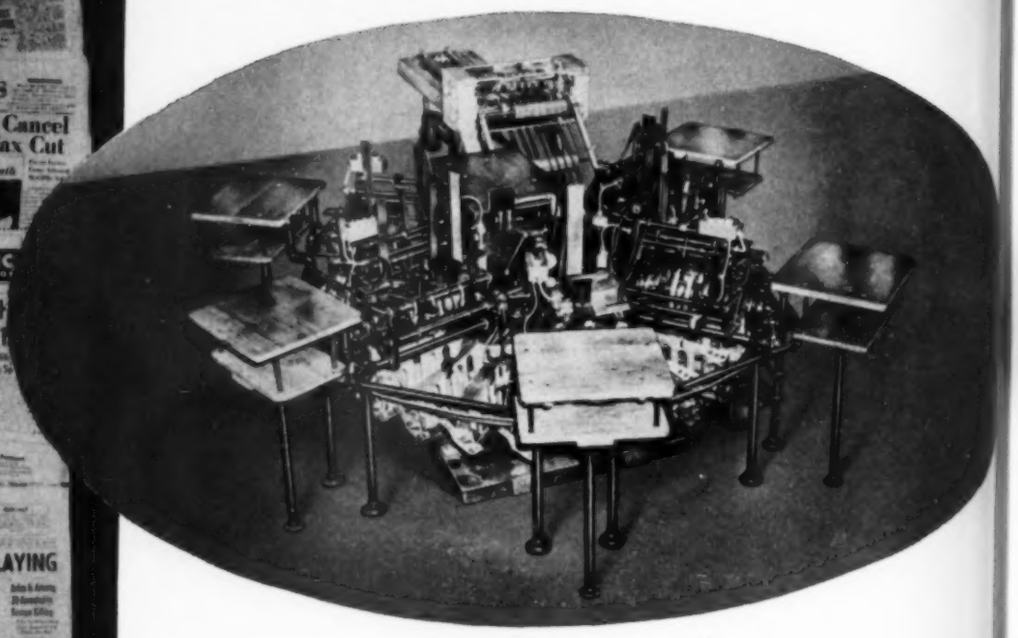
Ike Seeks to Cancel Scheduled Tax Cut
The Oregonian
The Evening Star
PRESIDENT SEIZED IN PANAMA SLAYING
BABIES DIE OF EXPOSURE IN PUENTE
Los Angeles Times
L.A. ACCIDENTS MOUNT: JAIL 40 DRUNK DRIVERS
Happy New Year to All Our Readers
The Vancouver Sun
Dulles Says Danger Of War Lessening
The Detroit News 5
SHEPPARD READY TO REST HIS CASE
THE MILWAUKEE JOURNAL
Officer Shoots Store Burglar on Shorewood Athletic Field
THE TELEGRAM

...more inserts per Dollar



The new four- or five-hopper 24P Sheridan Stuffing Machine offers you the flexibility required to meet all insert conditions.

Advanced engineering gives faster, neater and more economical delivery in various combinations, into jacket or wrap-around sections, at operating speeds up to 12,000 per hour. There are no hit or miss insertions—you get perfect count for every edition. Compact design of the 24P saves considerable floor space.

No matter how tough your stuffing problem may be, you can depend on Sheridan to solve it. A representative will be pleased to explain how the 24P Sheridan Stuffing Machine can help you get out a better looking edition.

For newspapers having more than five sections the Sheridan 48P is available, and for those with two or three sections, inquire about the newest Sheridan 12P.

Write today for our illustrated booklet, without obligation.

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183 Essex St., Boston 11, Mass.
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52/54 High Holborn, London, W.C. 1, England

March 1956

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields, covering major processes.

PRINTING EQUIPMENT Engineer

Volume 86 **Number 6**

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EDITORIAL STAFF

MacD. Sinclair, Editor

Adam Henry Reiser
Associate Editor

Arthur W. Zimmerman, jr.
Assistant Editor

BUSINESS STAFF

Don Will, Publisher

J. A. Petrequin, Sales Promotion Manager, 1276 West Third St., Cleveland 13, O. Phone: PRospect 1-0088.

William L. Osborn, Eastern Advertising Representative, 2709 Grand Central Terminal, New York 17, New York. Phone: MUrray Hill 6-5980.

Melburn O. Simmons, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone: DEarborn 2-6467.

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Equipment and *Supplies*

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT Engineer, 1276 West Third St., Cleveland 13, O.

Magnesium Newspaper Base

Monomelt Magnesium Base is available in single and multiple column widths and specified depths. It can be ordered for all combinations of column and rule widths, and for heights for mounting 11 pt. electrotype and plastic ad plates, 16 ga. engravings and Fairchild cuts, according to a recent announcement by The Monomelt Co., Inc. Monomelt Magnesium is said to be machined to tolerances of plus or minus 0.001 in. in height or thickness and plus or minus 0.005 in. in length and width. Magnesium, while the lightest material available, is claimed not to be injured by tight lockup and stereotyping mat rolling or direct pressure molding. Special size Magnesium Base or Slabs can be furnished for use as molding slabs, proof press base and special size base for mounting rubber printing plates. Max. width is 24 in., max. length 36 in., thicknesses from 0.500 in. to 0.918 in. Special size base or slabs are machined to tolerances of plus or minus 0.0015 in. in height or thickness and plus or minus 0.010 in. in length and width. For further details, please mention PEE No. 74 in your request.

Fine Grain Zinc Alloy

Imperial Type Metal Co. recently announced Vitaplate, a fast etching extremely fine grained zinc alloy. This metal can be used in powderless etching machines with modified ANPA-Dow solution and by regular nitric acid process. Vitaplate is said to make fine screen halftones with pinpoint highlight dots. It is also said to be nonflammable, and engravings made with the alloy have high oxidation resistance. The alloy can be sawed, tooled and repaired. It is also claimed that plates made of the alloy require no special preparation for storage. The metal is claimed to be free from attack of high acid content printing inks and type washes. For further details, please mention PEE No. 86 in your request.

Exclusive ProType Distributor

Mergenthaler Linotype Co. is now exclusive distributor of ProType equipment for setting type photographically. ProType is a system for composing consecutive lines of type on photosensitized paper by means of a negative containing the complete alphabet in selected point size and contact photography. (See Sept. 1955 *Printing Equipment Engineer.*) Product of ProType is a right reading paper positive. It is a 1:1 reproduction process. Sponsor states the spacing of letters, words and lines is accurately controlled. It is a one-letter-at-a-time exposure system. Negative letter patterns (fonts) in type sizes from 6 pt. to 90 pt. are available in over 10,000 different fonts. Single or consecutive lines of composition up to 16 in. width and depth can be handled.

With ProType, staggered lines, justified lines, accurate leading, angles, special designs and patterns may be obtained. The work may be done over an original layout in ordinary room light. ProType is operated on 110 v., 60 cy. a.c. current.

The sensitized paper and/or film are slow emulsion photographic materials and may be processed with any standard paper developer and fixed with normal hypo solution. A print may be developed in ½ min. The print may be dried on any conventional drier, but a ProDrier can be used to dry a print in 5 min.

ProType equipment consists of an inclined desk-like working board approx. 24 in. by 24 in. Mounted on its surface are the sensitized material, carriage, font track, spacer tracks, contact platen, upper and middle light shields. Beneath the working board is a fluorescent lamp and electrical components necessary to exposure lamp operation. The movable exposure lamp containing a special lighting element, which is positioned over each letter negative, is controlled by a finger switch—that is, it is illuminated by the finger switch only while resting directly over the negative letter character when printing upon the sensitized paper.

(*Continued on Page* 10)

SPEED PRODUCTION with RICHARDS' PRECISION SAWS • ROUTERS • MORTISERS

For further information on these and other **RICHARDS EQUIPMENT, Saws — Routers — Mortisers, please write**

'ELECTROMATIC' SAW TRIMMER
For Stereotypers, Electrotypers, Photoengravers
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Patented Straightline Control Feature

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The Elrod
for dependable production of leads, slugs, rule, plain border and base material

Ludlow Spacing

Printers using Ludlow retain all the values of good hand spacing. The projecting "ears" of Ludlow space matrices make them easy to handle. Correct spacing between words and letters is readily visualized, and thin spacing and letterspacing are easy and simple. A turn of the thumbscrew holds the line for casting.

Ludlow Typograph Company 2032 Clybourn Ave., Chicago 14

Print direct for sharper halftone reproduction

Newspapers are printing direct from original halftone engravings produced on a Fairchild Scan-A-Graver to eliminate the loss of detail that results from matting and stereotyping.

Fairchild engravings are flexible and easy to use. They mount directly on to the stereo. The resultant presswork is sharper, cleaner halftone reproduction that most nearly approaches the quality of the original photograph—an accomplishment in which everyone on the newspaper will take pride.

Fairchild representatives will be glad to show examples of direct printing and demonstrate how to get better quality with Scan-A-Plates*.

* Because your newspaper takes pride in high quality reproduction, you'll be interested in Scan-A-Plates produced right in your own shop. For complete information write Fairchild Graphic Equipment, Inc., 88-06 Van Wyck Expressway, Jamaica, New York, Dept. 100-21-E1.

FAIRCHILD

SCAN-A-GRAVER

Electronic Engraving Machines

From this control panel a technician introduces black, blue, red or yellow dyes to pulp stock in proportioning boxes. Scrupulous care is taken to insure the shade of white desired.

HOW HIS "4-COLOR" WORK MAKES YOURS EASIER

This is Allen Herman. From this board – part of a giant new $1.2 million pulp stock handling system – he controls the flow of dyes in making paper at New York and Penn's Lock Haven, Pa., mill.

The scientific addition of dissolved colors into the pulp stock assures maximum consistency of color from one roll of paper to the next. Blue-white paper? Or a white sheet with a pinkish tint? Allen Herman takes into account the inherent color of the stock being processed, the color required and many other factors... and then adjusts the controls. The result is not only whiteness, but an *exact degree of whiteness* you can count on from one roll or carton to the next.

Color is only part of the tale, however. Other parts of the processing system control the stock consistency, flow, blending, and chemical and filler addition. To give you a notion of the system's massive dimensions – it takes more than 50 regulating instruments to control stock flow and liquid level alone.

An intricate system? Yes. But worth every penny of its cost in terms of the *consistent* high quality of the paper New York and Penn can deliver to your pressroom.

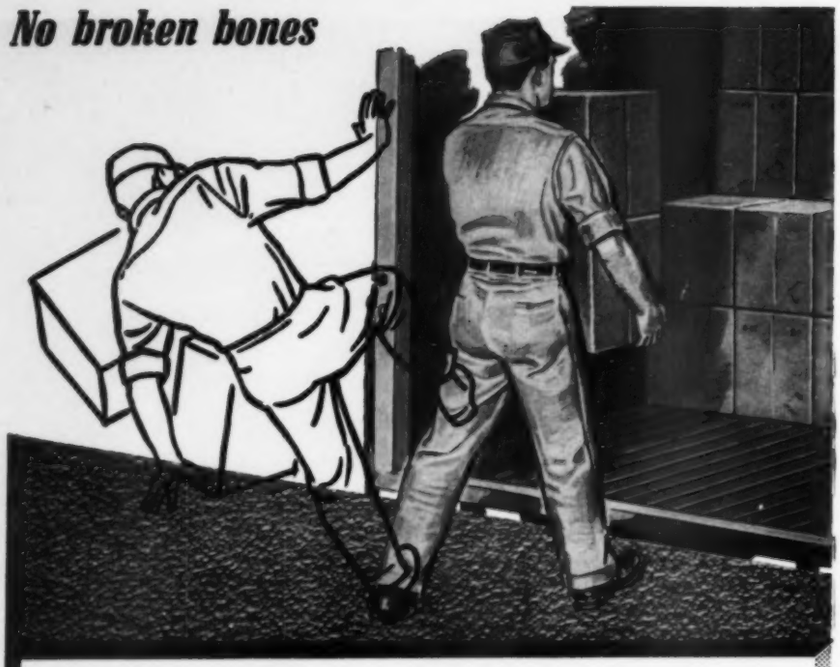
If you'd like to know more about the papers with the "Million-Dollar Quality," why not call your distributor today? Or write New York and Pennsylvania Co., 230 Park Ave., New York 17, N. Y.

New York and Penn

Pulp and Paper Manufacturers

Super • English Finish • Eggshell • English Finish Litho • Offset • Music • Bond • Tablet • Duplicator • Mimeograph • Drawing • Imitation Press Board • and other specialty grades

No broken bones



The Accident did NOT happen *thanks to* A.W. ALGRIP

World's only abrasive rolled steel floor plate

No slip!

Except in accident and insurance rates!

Because neither oil, grease nor water—on flat or inclined surfaces—can reduce the powerful friction grip of ALGRIP's uniformly embedded abrasive particles.

ALGRIP's abrasive is rolled in—*not coated*—to a controlled depth as an integral part of the steel plate. Wear and tear merely expose more abrasive. ALGRIP, made by a patented process, fabricates easily—maintenance is practically nil.

Make a test installation in your worst slipping area. Watch accident rates go down.

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE

ALGRIP—*approved for safety by Underwriters' Laboratories.*

ALAN WOOD STEEL COMPANY
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Please send A.W. ALGRIP Booklet AL-30

Name _____

Title _____

Company _____

Address _____

City _____ Zone ____ State _____

Other products: A.W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates—Sheets—Strip—(Alloy and Special Grades)

Equipment & Supplies

(Continued from Page 6)

ProType fonts consist of a film negative bearing all cap and lower case letter characers, numerals and punctuation marks. (Some fonts, however, are not designed with lower case.) For more details, please mention PEE No. 75 in your request.

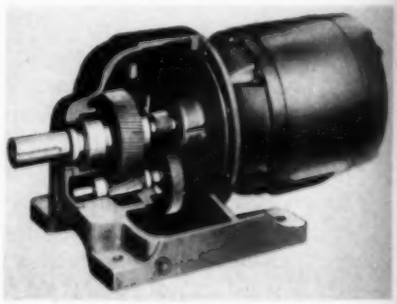
Hand Perforator

The F. P. Rosback Co. recently announced the Rosback 12 in. Hand

Perforator which supersedes the former 10 in. Hand Perforator. Redesign of the operating linkage is said to cut the effort required to perforate a full 12 in. line to one half formerly required to perforate a 10 in. line. The 12 in. Hand Perforator weighs 38 lbs. For further details, please mention PEE No. 67 in your request.

Gearmotors and Motogears

A line of Gearmotors and Motogears in keeping with new NEMA motor sizes has been introduced by Link-Belt Co. Ratio changes are simplified through the use of one low-speed gear set per drive size. Oil tight design is accomplished by



Link-Belt Co.'s Gearmotor

means of a one piece housing with an input cover and two shaft openings. Seals are used to retain oil and prevent dirt from entering the housing. A locking backstop is available with any Link-Belt Gearmotor or Motogear. It can be installed at any time without additional parts or modifications. Output speeds range from 280 r.p.m. down to 6 r.p.m. The Link-Belt Gearmotor, with rabbet-fit, flange mounted NEMA motor, can be mounted on the floor, wall or ceiling. The flange is standardized, one size per motor. Type DF double reduction Gearmotors have ratios from 6.2:1 through 31.4:1 and transmit up to 30 h.p. Type TF triple

(*Continued on Page* 14)

Professional Help with Plant Layout

Whenever you are considering new plant, modernizing your pressroom, adding or relocating press and stereotype equipment, be sure to get assistance from the Goss Company.

Goss' large Engineering Department is staffed with veterans who have solved pressroom problems of newspapers, magazines and rotogravure plants for many years. They advise publishers, cooperate with architects and engineers, check with builders, and help production managers and press superintendents plan installations to get the maximum flexibility and output—and to get it most efficiently.

Press arrangement, foundations, plate and paper roll handling, conveyor installation, special accessories—all these and related details are worked out smoothly to give you the best use of equipment.

This is another *plus*-value that the printing industry gets from Goss.

THE GOSS PRINTING PRESS COMPANY

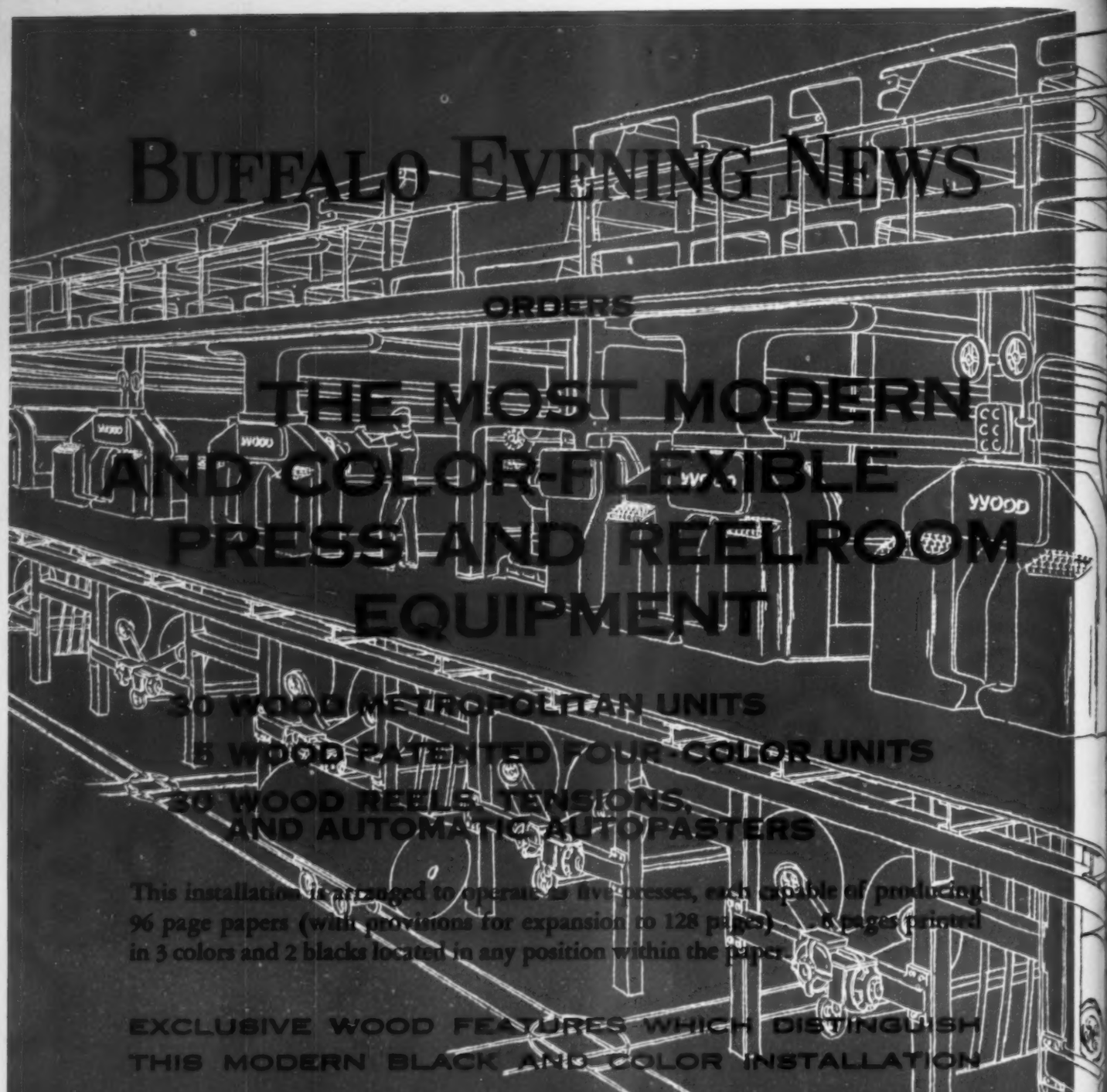
5601 WEST 31ST STREET • CHICAGO 50, ILLINOIS

World's largest manufacturer of newspaper, magazine and rotogravure presses

BUFFALO EVENING NEWS

ORDERS

THE MOST MODERN AND COLOR-FLEXIBLE PRESS AND REELROOM EQUIPMENT



30 WOOD METROPOLITAN UNITS

5 WOOD PATENTED FOUR-COLOR UNITS

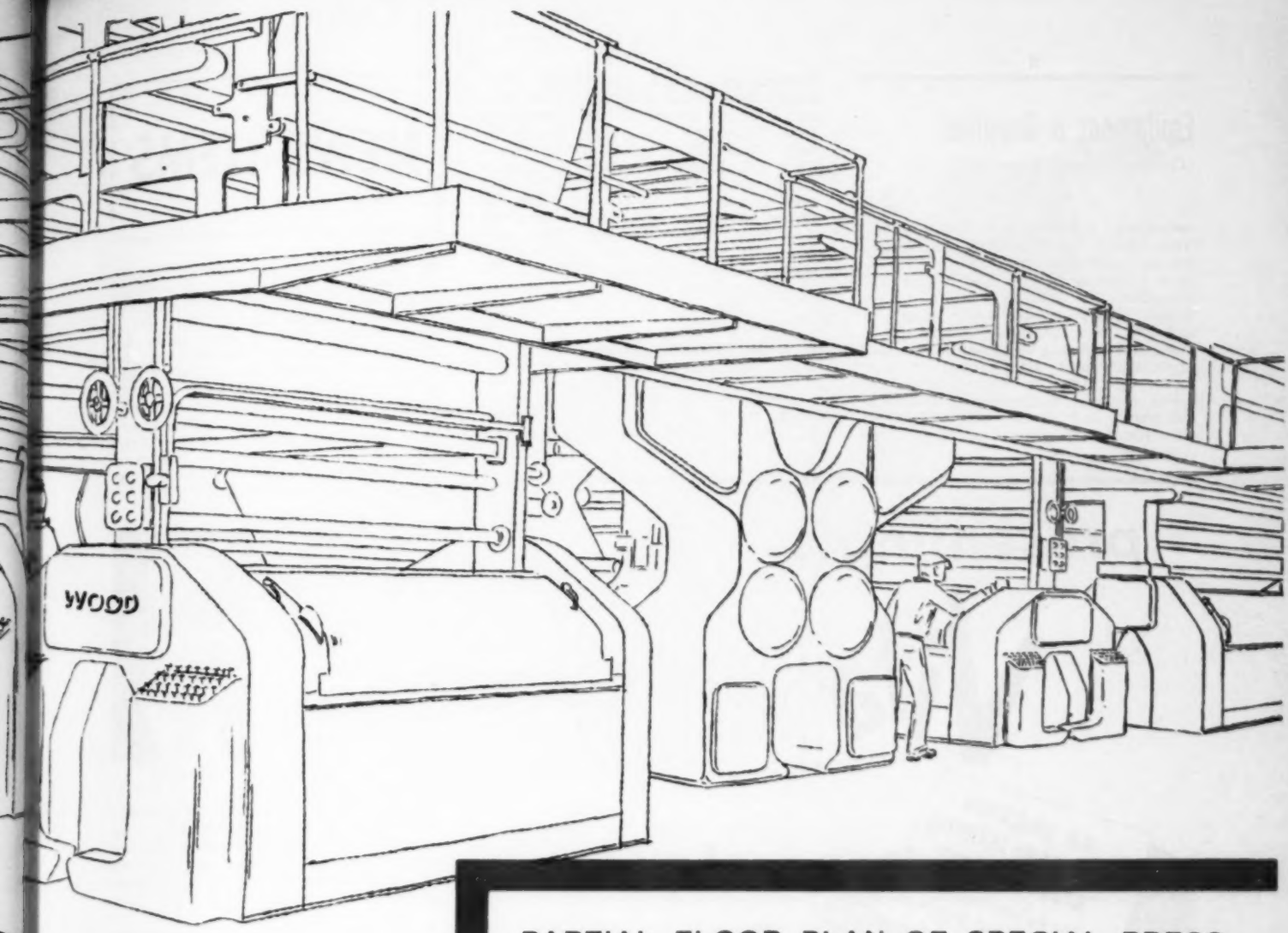
30 WOOD REELS, TENSIONS, AND AUTOMATIC AUTOPASTERS

This installation is arranged to operate as five presses, each capable of producing 96 page papers (with provisions for expansion to 128 pages) 4 pages printed in 3 colors and 2 blacks located in any position within the paper.

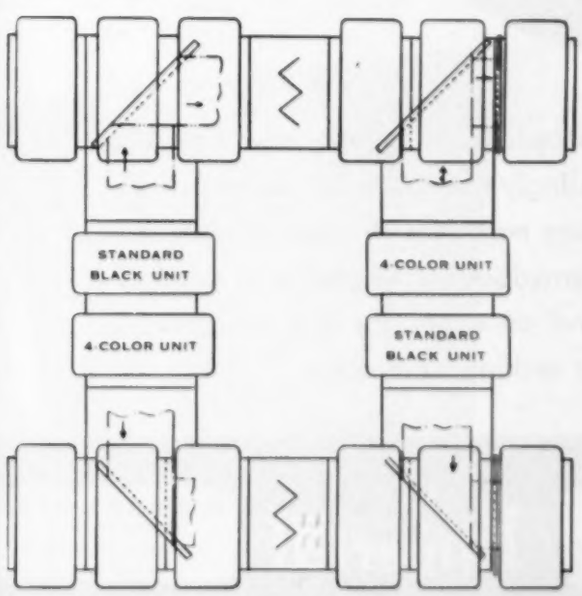
EXCLUSIVE WOOD FEATURES WHICH DISTINGUISH THIS MODERN BLACK AND COLOR INSTALLATION

- Waist-High, *mechanical*, Ink Controls for positive adjustment of each key without stooping or kneeling.
- Wood Auto-Tensionclamp Plate Lockup . . . no tools or wrenches required . . . only a finger flip of a small control lever, located on side frames, to lock or unlock plates.
- Utmost color-flexibility possible by placement of Wood Patented Four-Color Units at right angles between two lines of presses. Through use of *single* turning bar, color web can be placed in any web position, front or rear of folder.
- Continuous film-feed inking system throughout . . . Wood Portable continuous film-feed Ink Fountains for greater color flexibility.
- Heaviest and sturdiest construction guaranteeing the utmost in trouble-free operation . . . with minimum maintenance and lowest operating cost.

BETTER LOOKING NEWSPAPERS ARE YOUR BUSINESS . . . AND OURS!



PARTIAL FLOOR PLAN OF SPECIAL PRESS ARRANGEMENT FOR BUFFALO EVENING NEWS



Plan view of in-line Presses with four-color unit and standard unit at right angles, permitting printing of one side black and 3-colors with black on opposite side of web, delivered at right angles to in-line presses. Web can be inserted in any position into in-line press arrangement with a single turning bar

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY • Executive & Sales Office: 501 Fifth Avenue, New York 17, N. Y.

Equipment & Supplies

(Continued from Page 10)

reduction Gearmotors have ratios from 38.4:1 through 292:1 and transmit up to 20 h.p. The Link-Belt Motogear is designed for applications destructive to ordinary gear drives where heavy chock loads must be handled without damaging effect. The cast housing is used to furnish protection and the motor bracket mount is built to withstand heavy loads without deflection. Rigidity of the shaft and pinion is provided by a straddle mounted pinion, which withstands shock, reversing and heavy loads, states sponsor. The motor can be replaced by removing four bolts and separating the coupling. Draining of oil is unnecessary. Type DB double reduction Motogears have ratios from 6.2:1 through 38.4:1 and transmit up to 60 h.p. Type TB triple reduction Motogears have ratios from 47.1:1 through 292:1 and transmit up to 20 h.p. For further details, please mention PEE No. 65 in your request.

Lawson Promotes Reiss—Lester M. Reiss has been appointd vice president of E. P. Lawson Co., it was announced by D. W. Schukind, president. Reiss will continue in his capacity of eastern sales manager.

presenting...

Vitaplate

by Imperial

• This is Vitaplate. A superb, new zinc alloy of exceedingly fine grain for use in powderless etching machines or regular nitric acid process production. Vitaplate is available now. Send an order for this remarkable, new, fast etching zinc alloy.

REGULAR (Green Redibak) Meets requirements for all usual applications

Imperial

DURAPLATE (Orange Redibak) Alloyed for extra heavy duty

IMPERIAL TYPE METAL CO.

CHICAGO 50 • NEW YORK 7 • PHILADELPHIA 34

NEWS ITEMS

Keeshan Appointed—Alvin W. Keeshan has been elected vice preesident and chief engineer of Modern Engraving and Machine Co., Hillside, N. J. The announcement was made by Robert F. Nelson, president of the company. Keeshan is a graduate certified aeronautical engineer. Prior to joining Modern Engraving and Machine Co., he served as manager and chief engineer with American Type Founders where he was in charge of the division devoted to gravure and flexographic printing equipment.

BAKER

Baker Named Research Assistant—Charles W. Baker has been appointed assistant to the director of research, American Type Founders, according to an announcement by William W. Fisher, vice president. Baker joined ATF in 1942 as product engineer in the Sales Research Department and prior to his appointment as assistant to the director was senior research engineer. Baker is a member of the Technical Assoc. of the Graphic Arts.

Three Promoted at 3M—Promotion of Ed S. Nederostek and Allen J. Huber to sales supervisors of the printing products division has been announced by Minnesota Mining & Mfg. Co. Nederostek will be responsible for printing products sales in Texas, Louisiana, Missouri, Arkansas, Oklahoma, Nebraska and southern Illinois. He will headquarter in Dallas. Huber will supervise printing products sales in Tennessee, Mississippi, Alabama, North Carolina, South Carolina, Georgia and Florida. His headquarters will be in Atlanta, Ga. Promotion of James R. McClintick to production manager of the printing products division was also announced by 3M.

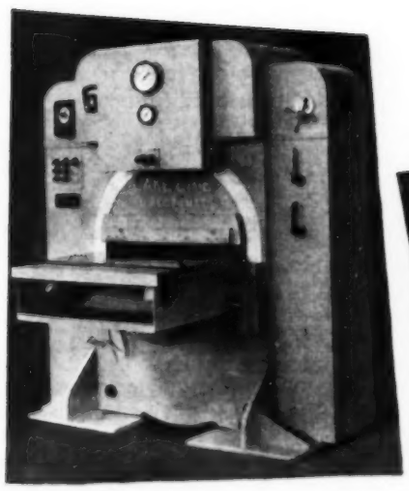
Rotogravure Engineer at Staude—Appointment of Lawrence H. Haskin, jr. as chief engineer of the Rotogravure Division of the E. G. Staude Mfg. Co. has been announced by Samuel K. Lynn, executive vice president. Haskin received his engineering training at the University of Maryland. Following service in the U. S. Air Force, he joined the Champlain Company, Inc. as design engineer.

Merges With Arrow Press—Arrow Press, long-run commercial color printing, and William E. Rudge's Sons, printers of books and corporation literature for 80 yrs., have merged under the name of Arrow Press, Inc. Announcement was made by Jacques Pollack, president of the merged Arrow Press, Inc. Maxwell

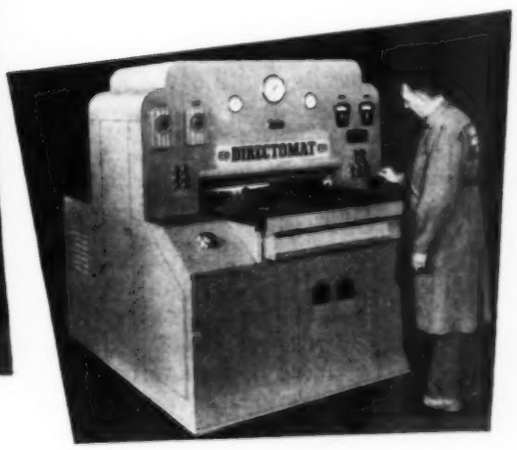
(Continued on Page 24)

PEAS IN A POD

Directomats simplify the molding of accurately registered color mats. In a pamphlet entitled *Production Methods for Better ROP COLOR in Newspapers*, the Milwaukee Journal advises: "Use the hot mold direct pressure method for molding color mats." The Milwaukee Journal and approximately 75% of the other leading newspapers molding ROP color mats use Directomat molding presses.



800 ton Directomat



1000 ton Directomat

REMEMBER:
the Directomat is also excellent for the production of high quality black and white mats.

LAKE ERIE HYDRAULIC PRESSES

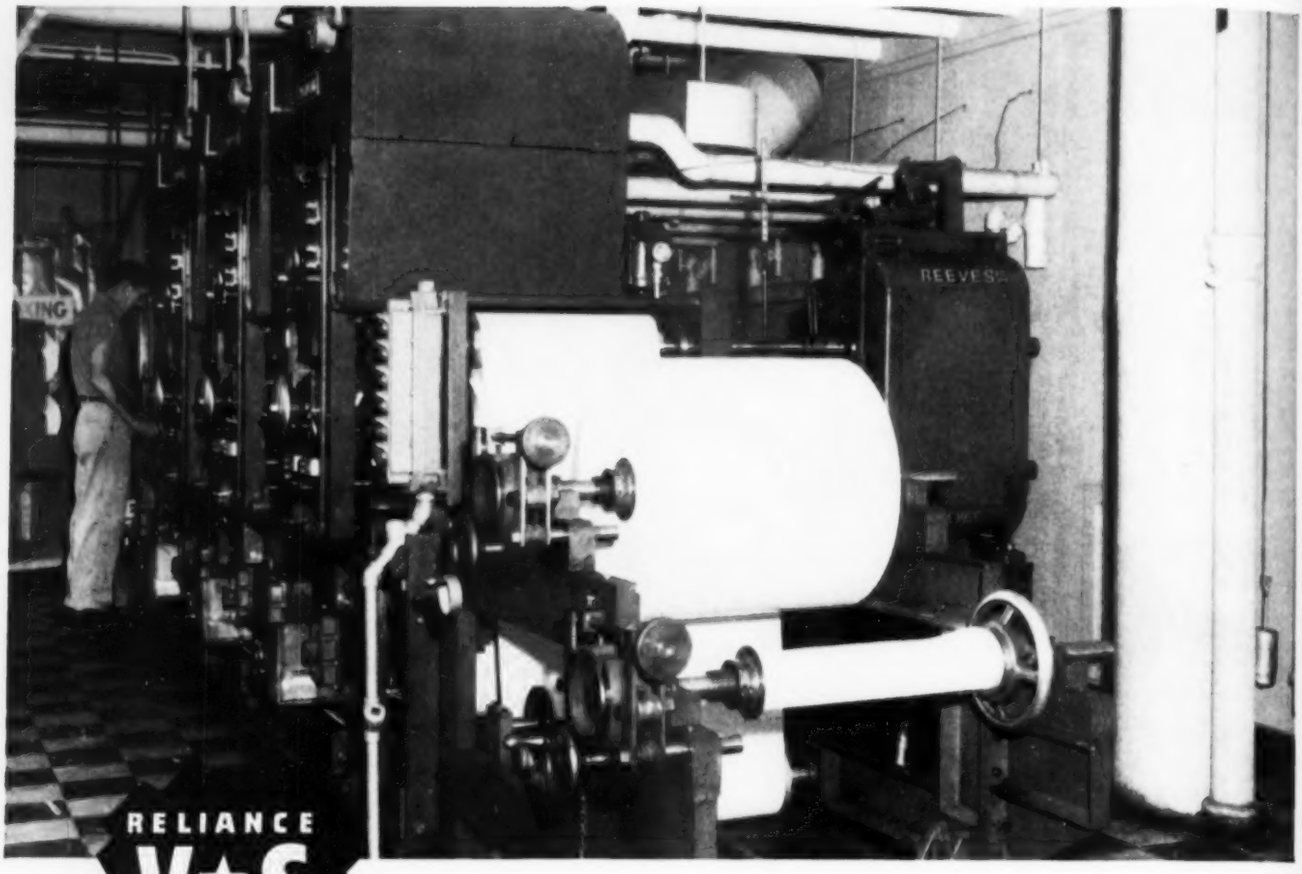
Send for Directomat Bulletin 349

LAKE ERIE ENGINEERING CORPORATION

568 Woodward Avenue, Buffalo 17, New York

Manufacturers of the Lake Erie ACRAPLATE . . . the leading equipment for rubber and plastic plate molding.

LAKE ERIE® ACRAPLATE® DIRECTOMAT®



RELIANCE V★S DRIVE®

SHAVES PRODUCTION COST OF RAZOR BLADE ENVELOPES 35%

800 lb. rolls of paper 20½" wide are hoisted on a roll stand at one end of a rotogravure press. A web feeds automatically to the printing unit through an eccentric die-punch and to a rewind unit.

12 rolls of envelopes are printed the width of the web.

45 million razor blade envelopes are printed, die-cut, slit and rewound each month with an estimated savings of 35%.

Reliance V★S Drives are the major factor in this remarkable installation.

Power is supplied from one central 20 hp. drive. Web tension is controlled by the variable speed drive under regulation of a dancer-roll.

This representative Reliance V★S Drive installation, solving a difficult operating application, provides infinite adjustment of wide range, variable speed; jogging; creeping; smooth acceleration and deceleration; and dynamic braking. What's *your* drive problem?

D-1515

Write for bulletin D-2311.

RELIANCE ELECTRIC AND ENGINEERING CO.

CLEVELAND 10, OHIO • OFFICES IN PRINCIPAL CITIES

Canadian Division: Welland, Ontario

Get spot news in ROP COLOR while it's still hot!

4 HOURS AND 45 MINUTES FROM PICTURE TO PRESS RUN

This dramatic spot news photo was taken by Milwaukee Journal Staff Photographer John Ahlhauser with a Curtis One-Shot Color Camera at 8:45 A.M. The negatives were delivered to the photo lab at 9:05, and printed by 10:35. The Journal's engravers turned out the three color plates—red, yellow, and blue—within 55 minutes, and the picture was used in the 1:30 P.M. press run . . . just four hours and 45 minutes after it was taken.

Curtis simplified ROP COLOR gives you striking quality, in less time, at lower cost

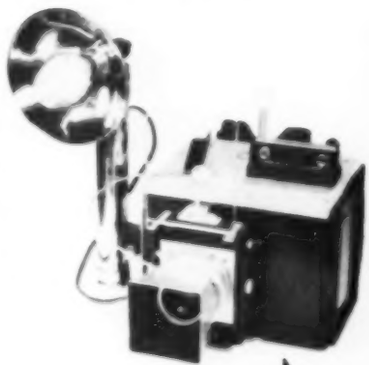
Today – the growing nearness of color television competition is stimulating many newspapers to add the excitement of *spot news photos* – and advertising – in ROP Color. And for many newspapers, the simplicity, speed and economy of *Curtis ROP Color* equipment and techniques is strengthening their competitive position, building profits and prestige, increasing circulation, and adding to sales and advertising income.

As a powerful sales and merchandising aid, the true color–simplicity and economy of Curtis ROP Color equipment has given many newspapers a competitive advantage not possible by any other system!

For over 20 years Curtis has specialized in color. *Today – this specialization and concentration has resulted in the development of a remarkably effective 3 color process that produces tremendous savings in time and production costs!*

Curtis *simplified* ROP Color will give any newspaper – of any size – anywhere – top quality color photo and advertising coverage swiftly and economically! The speed and ability of Curtis ROP Color to meet deadlines while the news is "hot"– is paying off in increased reader-interest, increased circulation – increased advertising. And when you work against deadlines – speed is essential.

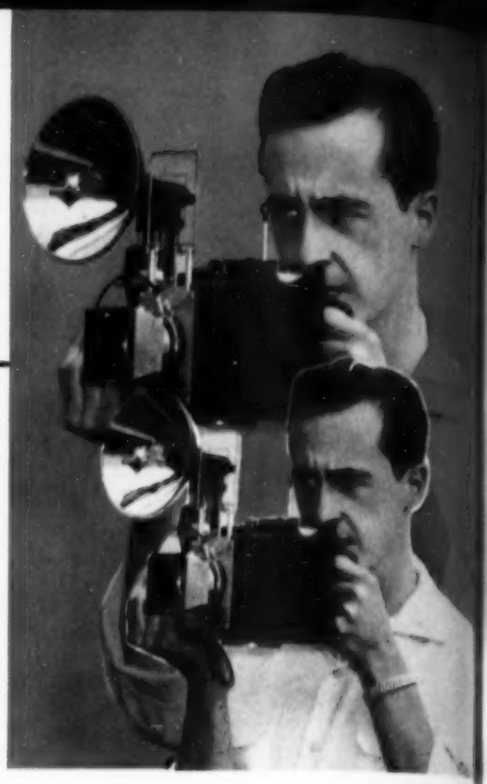
Write for complete information today on Curtis ROP Color . . . do it NOW! CURTIS LABORATORIES, INC., 2718 Griffith Park Boulevard, Los Angeles 27, California.



HERE'S HOW CURTIS *simplified* ROP COLOR WORKS . . .

Curtis LABORATORIES, INC., 2718 Griffith Park Boulevard, Los Angeles 27, California

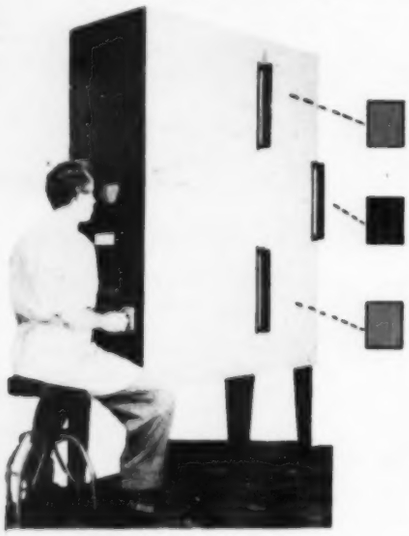
Here's what Curtis ROP COLOR is... and how it works!



Basically, the Curtis system of ROP Color makes possible full color reproduction in newspapers by converting everything to the simplicity of black and white methods – thus reducing the entire color operation from hours to minutes! It uses the three primary colors only, produces substantial savings in production time and costs, with the simultaneous improvement in reproduction quality. This is done by the use of the Curtis one-shot Color Camera and the Curtis Color Analyst. Curtis offers not only the method and system which makes ROP Color more practical and economical – but also provides the *only* equipment by which color combinations can be checked visually at *all* stages.

CURTIS COLOR ANALYST

The Color Analyst is the heart of Curtis ROP Color. It is an optical device employing filters and mirrors to present a color picture from three black and white photo prints of a color separation. The purpose is to then check visually if these prints are correct or suitable for color printing. What these black and white prints have recorded is seen – in full color – in a matter of minutes. No mathematical calculations are necessary because color analysis is done by visual observation and the simple, manual adjustment of a few knobs. Regardless of how the original subject was photographed - with a Curtis one-shot camera or with color film – it shows the final result and enables you to get the best in quality and value out of any given photo. Indispensable for profitable ROP Color – for advertising or spot news *photography* – the Curtis Color Analyst eliminates guesswork, provides better reproduction, and produces definite savings in time and production costs!



CURTIS ONE-SHOT COLOR CAMERA

For 20 years, the Curtis One-Shot Color Camera has been the most widely-used color camera in the world! This precision-engineered, direct-color camera was designed expressly for high speed newspaper spot news or sports photography. Using ordinary black and white panchromatic film . . . it provides three balanced color separation negatives directly from the subject with a single exposure.

Two models are available, the Curtis 4 x 5 Color-Scout or the 2½ x 3½ Press Special. Compact and lightweight, these are equipped with synchronized range-finders, sports viewfinders, lens shades, and filter holders. In addition, the Press Special has interchangeable 5¼ and 10-inch telephoto lenses. The Curtis One-Shot Color Camera gives you the finest possible color photography at the lowest cost.

CURTIS OPTICAL COLOR PRINTER

Engineered to high quality optical and mechanical precision, Curtis Color Film Enlarging Printers produce the finest possible color separation negatives from color transparencies. Complete with filters and fully corrected lenses, Curtis printers make 4" x 5" color separation negatives from roll film – 35mm, 2¼" x 2¼" and 2¼" x 3¼" transparencies at magnification of 1½x to 5x. Not used with a Curtis one-shot Color Camera, these Curtis printers are needed only to produce separation *negatives of color transparencies* in order to obtain the highest possible definition, detail and minimum grain.

CURTIS CONTACT COLOR PRINTER

This printer is designed for the rapid production of automatically-balanced and color-corrected separation negatives from Ektachrome and other color transparencies. With built-in color separation filters balanced for equal exposures, this Printer accepts one 8 x 10, two 5 x 7, or four 4 x 5 subjects for group reproduction.

Competition from many sources today is speeding the increased use of ROP Color – and helping many publishers decide that now is the time to offer full ROP Color in their paper. Curtis ROP Color equipment helps solve the mechanical problems of color reproduction and offers new opportunities for economies in production.

Newspapers with Curtis ROP Color can strengthen their competitive position by the more frequent use of editorial features *in color* – and can gain a commanding advantage by their speed in reporting and printing spot news in ROP Color!

Write today for informatin on the use of Curtis ROP Color by your paper. There's no obligation for details, cost figures and applications.

FREE – new color brochure – "ROP Color Simplified" – gives detailed information on Curtis color equipment and color process – and how it can be used to save time and minimize production costs. Illustrated in Curtis ROP Color, it presents today's modern ROP Color story simply and concisely. Write for your copy to –

Thomas S. Curtis, Sc.D.
Curtis Laboratories, Inc.
2718 Griffith Park Blvd., Los Angeles 27, California

Curtis LABORATORIES, INC., 2718 Griffith Park Boulevard, Los Angeles 27, Calif

an

ANNOUNCEMENT

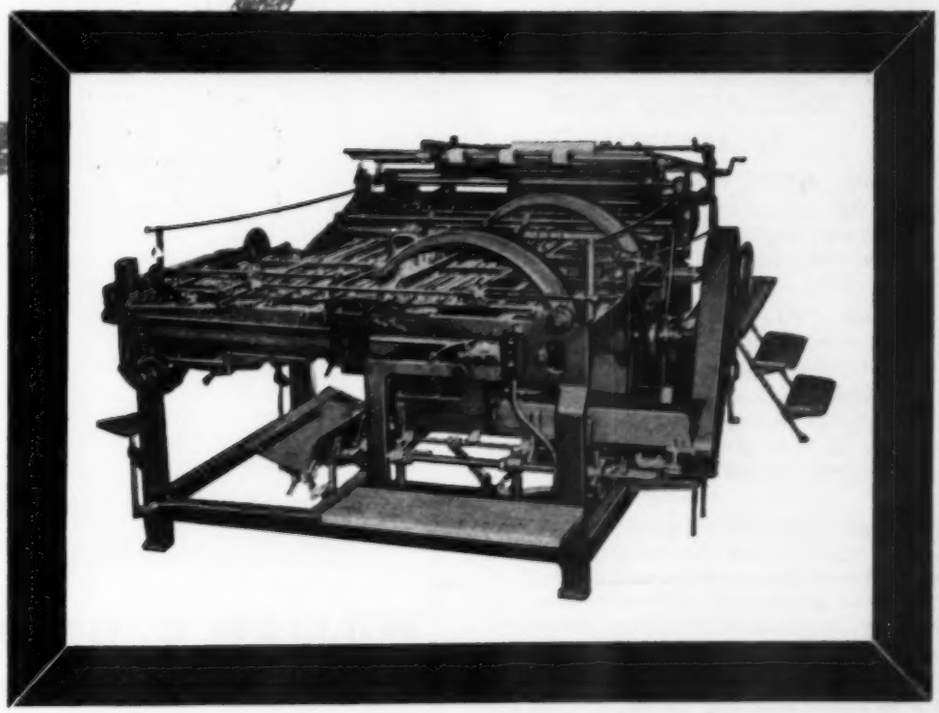
of interest

TO EVERY TRADE, BOOK OR COMMERCIAL BINDERY

The Dexter Folder Company, for the first time since 1949, is planning to manufacture a limited number of Dexter No. 191-A Book and Job Folders.

The decision to offer the 191-A Jobber once more was based on the numerous inquiries received from the bindery industry as to the availability of this machine.

If operating conditions in your plant are such that a knife-type folder is best suited to your needs, this is a unique opportunity to secure a machine that has been known for many years as the standard of the industry.



CONDENSED SPECIFICATIONS

Maximum Sheet: 44 x 58". Minimum Sheet: 19 x 25". Standard Folding Arrangement: 4 right angles and Parallel 32. Parallel Sixteen Attachment available if desired. Equipped with Cross Continuous Feeder.

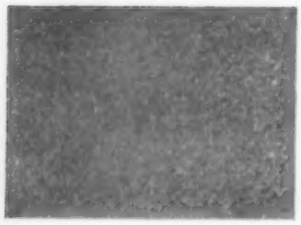
For detailed information contact your nearest Dexter representative.

DEXTER FOLDER COMPANY

GENERAL SALES OFFICE

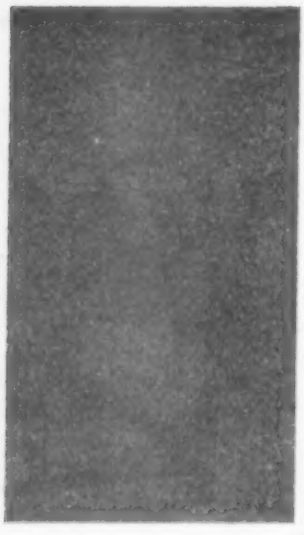
330 WEST 42ND STREET, NEW YORK 36, N.Y.

3869



UNIFORMITY!

HERRICK Inks



WILLIAM C. HERRICK INK CO.

Incorporated

EAST RUTHERFORD, N. J. JACKSONVILLE, FLA.

QUALITY NEWS, LETTERPRESS AND OFFSET INKS

NEW HOE matrix roller meets special requirements of high-shrinkage mats and combats newsprint cost

The change to a mat shrinkage exceeding ¾" in the width of the page has made it necessary to modify molding and drying procedures. Best molding results can now be obtained by using matrix rollers with free-wheeling or friction driven top rollers.

The new MONARCH III MATRIX ROLLER has been designed to meet these requirements. This unit is ideal for heavy duty service in large and small newspaper plants and for the strenuous operating schedules common in syndicate and commercial shops.

NOTE: Where extra heavy duty or two-speed operation are required, the HOE MONARCH II MATRIX ROLLER is still first choice in the industry.

SOME OUTSTANDING ADVANTAGES

MINIMUM DEFLECTION UNDER LOAD: Achieved by sturdy construction of all stressed parts; 10" solid forged steel rollers, ground and polished, one-piece side frames on heavy bed plate.

NO STRETCH — NO "TUCK-IN": Unsurpassed dimensional accuracy of molds because of free-running upper cylinder.

SILENT OPERATION: Worm and worm drive in oil-tight housings, large SKF self-aligning spherical roller bearings on upper and lower cylinders assure smooth operation and minimum power loss.

CONVENIENT ADJUSTMENT: Hand wheels and scales graduated in thousandths of an inch provide precise pressure adjustment at both ends of machine. Table stroke adjustable to suit multiple molding jobs of varying sizes.

CHOICE OF SPEEDS: The MONARCH III can be arranged for operating speeds of either 10 or 20 seconds.

R. HOE & CO., INC.

910 East 138th Street New York 54, N. Y.

BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO • BIRMINGHAM • PORTLAND, ORE.

THREE WISE LITHOGRAPHERS

1

This man's customers demand and pay for the highest quality multiple color work; he matches ticklish progressives, reproduces tints and tones. He uses IDEAL MASTERLITH vulcanized oil rollers throughout his press.

He knows it takes craftsmen to handle these rollers whose fine textures are the acknowledged aristocrats of the lithographic field. He depends upon these rollers to produce the quality he requires, knowing that exhaustive tests and years of usage have proved them to be unsurpassed for color transference and steadfastness of tone, free from hickeys. They control water better than any other lithographic roller.

2

The people to whom this man sells his lithographic work do not require fine color work. What they want is excellent, heavy color work, **fast.** He produces it for them hour after hour. He uses IDEAL GRAYTONE rollers in all positions except the last 2 forms over the plate. There, he uses IDEAL MASTERLITH rollers to keep the plate clean and avoid halos and hickeys. With this combination of rollers on his press, he gets speed and color at the cost of only a little extra care in handling the MASTERLITH rollers during installation and during shut-downs for lunch.

3

Here's a man whose customers want excellent quality but at the highest speeds presses will travel, to keep their cost within a budget. His presses are equipped throughout with IDEAL GRAYTONE rollers because they are especially made for heavy production runs in those pressrooms where all the men may not be skilled lithographers or where the maintenance work is done by itinerant labor. IDEAL GRAYTONE rollers are tough and are made to handle quick-set inks so necessary in high speed runs. The gray color of IDEAL GRAYTONE rollers enables this man to see at a glance whether his rollers are being kept clean so that colors will reproduce sparkling and clear.

One or the other of these plans fits your pressroom. By following these recommendations you can get the most out of your equipment, keep your costs low and deliver the kind of work your customers pay for. Remember that rollers are the heart of your press and without good rollers, ink doesn't flow.

4 FACTORIES

IDEAL ROLLER & MANUFACTURING CO.
CHICAGO 8, ILLINOIS — LONG ISLAND CITY 1, N.Y.
HUNTINGTON PARK, CALIF. — CHAMBLEE, GEORGIA

"I made a wise Investment installing a TTS System"

– says George A. Hough, Jr. Publisher, Falmouth Enterprise

"Before our Teletypesetter system was installed, we used three manually operated Linotype machines. Keeping three operators here in the 'country' was a problem. During every rush season, and particularly the 10-week summer vacation period, it was a terrible strain to get the news into type by manual operation. Overtime became a burdensome problem.

"Now, we depend on the TTS unit installed on our new Comet Linotype to set the bulk of our straight matter. We have accomplished this with one perforator operator punching tape. It hasn't even been a full-time, 40-hour a week job for her.

"Last year we published an average of 24 pages a week using just one full-time Linotype operator. He sets 80% of our advertising and monitors the TTS Operating Unit. Our foreman who makes-up practically all of the pages sits at a machine only at odd moments early in the week.

"Employee reaction to TTS has been one of welcoming the TTS operation for it has *materially* lessened deadline pressures on them.

"A good example of the important contribution that TTS has made to our operation occurred just before last Fourth of July . . . an especially busy time for us in this resort town. Our foreman — page make-up and spare-minute Linotype operator was suddenly taken sick. Yet, with only one operator we came out nearly on schedule Friday noon with a 30-page, 8 column, 12-em paper. Press run 6,700.

"The next two issues were 28 pages each and went to press on time still without the services of our foreman. Naturally, many hours of overtime went into these issues. Nevertheless, it is impressive that three trained men, one lumper and a woman TTS Perforator operator got these issues out on time.

"I am convinced we made a wise investment by automating with TTS."

Falmouth Enterprise

Rail Crew Ordered To Clear Crossing Arrives Just After Engine Crushes Car

The Falmouth (Mass.) Enterprise, winner of the All-New England General Excellence Award of The New England Weekly Press Association, has been enjoying the economies of a Teletypesetter System since February 1954.

Mrs. Irene Lawrence, chief perforator operator for the Falmouth Enterprise, converts copy into tape on the TTS high speed Perforator. She finds that she can teach substitute operators easily because of the Perforator's typewriter-like keyboard. Surveys show that within six months, a good touch-typist can punch tape at 400 or more lines per hour.

Here are Mr. and Mrs. George A. Hough, Jr., active publishers of the Falmouth Enterprise since 1929. Their son John, right, is the news editor. About Teletypesetter equipment publisher George Hough says, "I am an enthusiastic booster of TTS because of our experience using it . . . with TTS, we get type when we want it."

TTS Operating Unit produces a continuous flow of type automatically, without interfering with normal manual operation of linecasting machine.

For information on how TTS can increase your production write: Teletypesetter Corp., Dept. PE-3, 2752 N. Clybourn Ave., Chicago 14, Ill.

TELETYPESETTER

News Items

(Continued from Page 14)

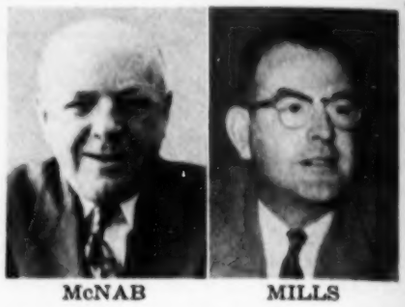
M. Geffen of William E. Rudge's Sons, will become chairman of the board. Geffen is also senior partner of Geffen, Morton & Griffiths, and president of Good Reading Rack Service.

Staude Address Change—Lawrence H. Haskin, jr. has been appointed chief engineer of the new Staude Rotogravure Div. of the E. G. Staude Mfg. Co., Inc. The address will be 129 Main St., Springfield, Vt. Elmer G. Stacy, rotogravure sales manager will also be headquartered in the Springfield Division. The manufacturing and sales of the regular Staude Gluer line and High Production equipment will continue at the present location in St. Paul, Minn.

Bauer Representative—Bauer Alphabets Inc. recently announced the appointment of its latest representative, Associated Typesetting Co., 217 N. 10th St., St. Louis, Mo., who will maintain a stock of the Bauer types and will service the eastern part of Missouri.

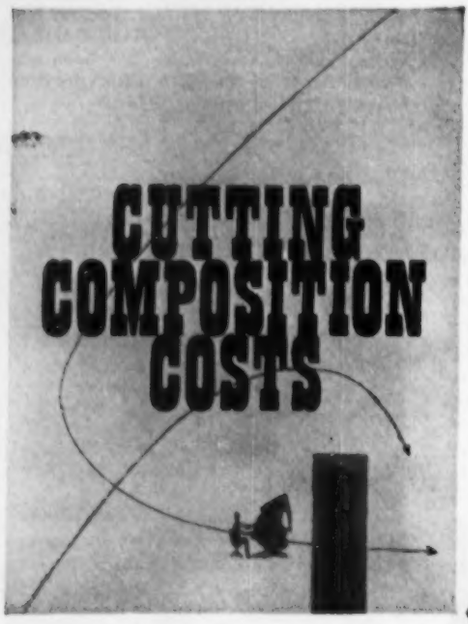
D. Thomas Kennedy, advertising manager since 1953 has been appointed to the newly created position of sales promotion manager, and Edward C. Stern has been named advertising manager of Robertson Photo-mechanix, Inc. Announcement was made by Leonard S. Florsheim, jr., president of the company. Kennedy will concentrate on dealer contacts and special uses of Robertson products. Stern joined Robertson's advertising department last December after three years with W. T. Sorenson and Associates.

Two Flint Ink Promotions—The directors of the Howard Flint Ink Co. announced the election of Alan A. McNab to sales vice president. Everett L. Mills succeeds to the position of sales manager of the company. McNab was sales manager for the past 30 yrs. Mills formerly managed the Flint factories in Atlanta, Ga., and New Orleans, La., and has been McNab's assistant for the past five years.



McNAB MILLS

Ralph Robuck, for some time past, production manager of the Lorain (O.) *Journal* and the Mansfield (O.) *News-Journal,* retired from active duty February 1. He, with Mrs. Robuck, will spend some time touring the Southwest and Florida. Afterwards he will be available for newspaper consulting work. He may be addressed at 17438 Clifton Blvd., Lakewood 7, O. Robuck recently finished supervision of the new Lorain *Journal* plant. Robuck's future plans have not been announced.



HERE'S THE ANSWER!

▶ FOR THE COMMERCIAL PLANT
▶ FOR THE TRADE PLANT
▶ FOR THE NEWSPAPER PLANT

The new 12 page illustrated booklet "Cutting Composition Costs" contains the answer to one of the most troublesome of composing room problems—the reduction of time, waste and spoilage incidental to the hand sawing of slugs. It explains in detail the many advantages of automatic slug sawing—with a Mohr Saw attached directly to the linecasting machine.

Mohr LINO-SAW COMPANY
8015 North Ridgeway Avenue
Skokie, Illinois

Mr. Composing Room Executive

Let this booklet tell you how efficiency can be increased and costs can be cut by automatic slug sawing with the Mohr Saw. Send today for your copy of "Cutting Composition Costs."

Litho Club Sponsors 1956 Two Day Program

Baltimore extends a welcome to the annual Convention of the National Association of Litho Clubs, to be held at the Lord Baltimore Hotel on Friday and Saturday, April 20 and 21. The Baltimore Litho Club with Thomas Bowden, convention chairman, stresses that attendance at the sessions is not limited to club members.

Before the formal opening of the convention is a meeting of NALC officers only, followed with assembly by Thomas Bowden, invocation by Dr. Paul Warner, welcome by Mayor D'Alesandro, and greetings by Lawrence Littman, president of Baltimore Litho Club. The luncheon speech is by Governor McKeldin which is followed by election of officers and business session.

On Saturday, a Quiz Panel will be moderated by Nathaniel Gamse, and at a luncheon guest speaker will be the Hon. Raymond Blattenberger, public printer of the United States.

ONLY ... OXY-DRY PRECISION ENGINEERING

GIVES YOU ALL THESE COMPETITIVE ADVANTAGES

GREATER PRESS SPEEDS
more impressions per hour

REDUCES REJECT SHEET WASTE
more deliverable sheets

PERMITS FULL PRESS LOADS
faster job handling time

USES LESS OFFSET POWDER
costs less to operate

FASTER SETTING & DRYING OF INK
less waiting time for next operation

ELIMINATES STATIC ELECTRICITY
"plumb-bob" jogging on press delivery

MUCH LESS SERVICE & MAINTENANCE
fill it...set it...forget it operation

ANY *one* of the above advantages would make OXY-DRY superior to any and all other offset prevention methods. Combined, they give the printing plant that has OXY-DRY equipment a tremendous competitive advantage that simply means more business, more profits and more satisfied customers.

If you want to increase the number of impressions per hour for every press in your plant, then you need OXY-DRY sprayers... write, wire or phone us today for more details.

OXY-DRY THE ONLY RIGHT INK OFFSET PREVENTION PROCESS

OXY-DRY SPRAYER CORPORATION

NEW YORK CHICAGO SAN FRANCISCO

320 South Marshfield Avenue, Dept. PE
Chicago 12, Illinois

GET IT..

OXY-DRY SPRAYER CORPORATION
320 S. Marshfield Ave.
Chicago 12, Illinois

We are interested in OXY-DRY Sprayers:
send more information ☐
or your representative. ☐

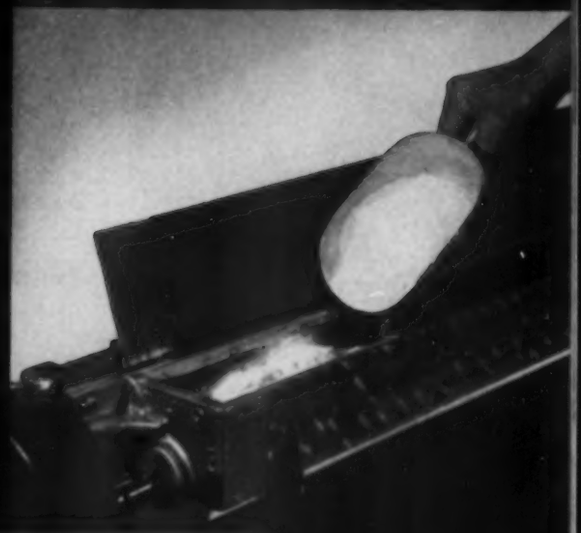
Firm Name_____

Address_____

City_____ Zone____ State_____

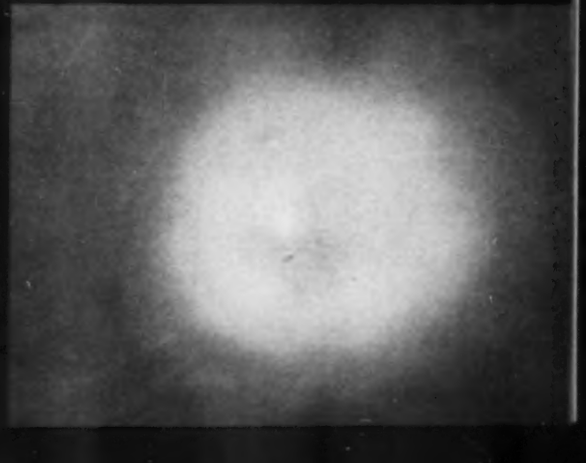
Individual_____

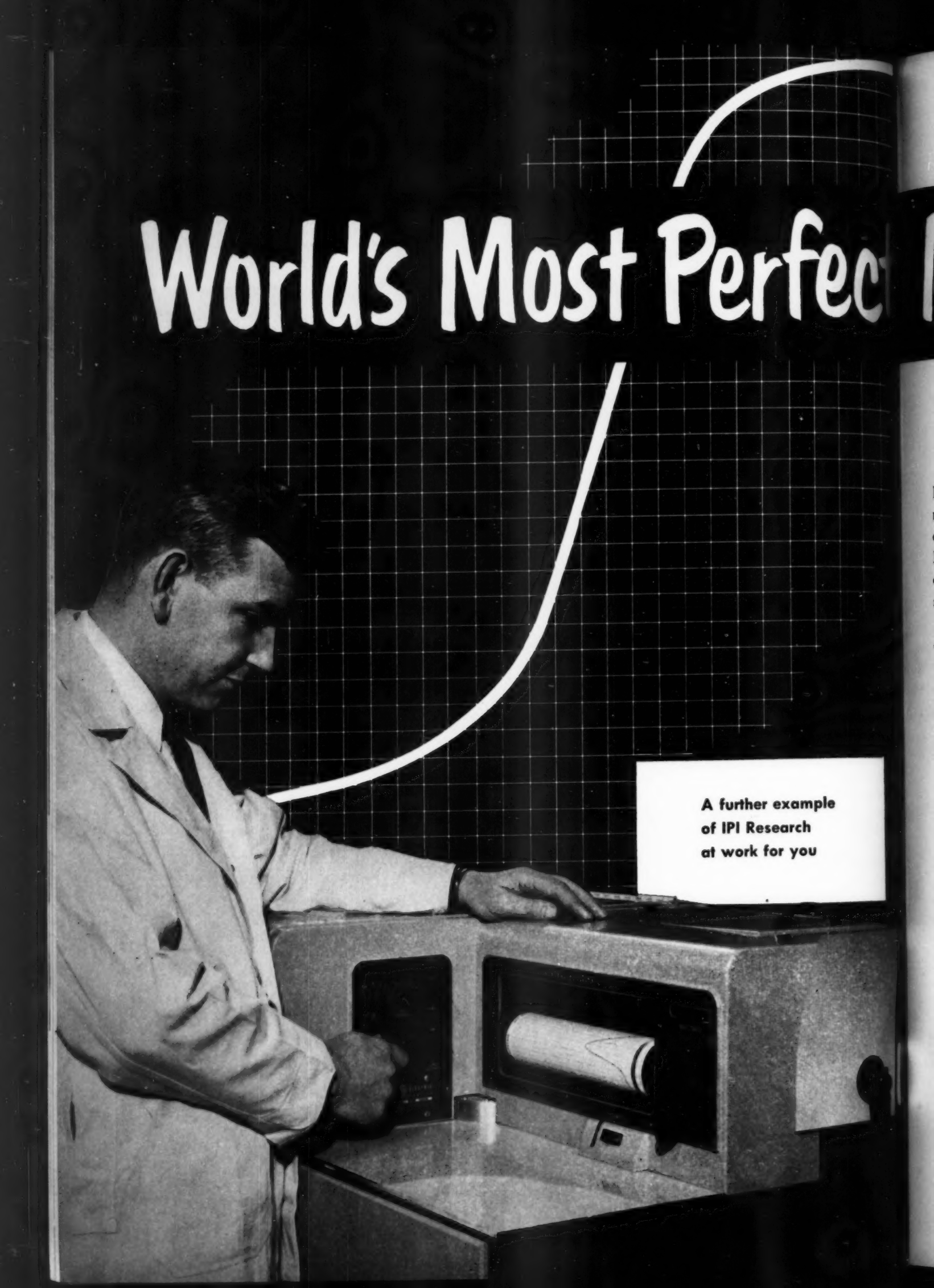
FILL IT..



SET IT..

FORGET IT!




World's Most Perfec
A further example
of IPI Research
at work for you

Memory For Color

GIVES YOU PRECISE, PERMANENT STANDARDS FOR COLOR CONTROL

Here is a precision laboratory instrument which measures and records color automatically and accurately. It is the latest model of the General Electric Recording Spectrophotometer—the first of which was built to specification by G-E engineers for the IPI Research Laboratories.

A trained human eye can distinguish one hundred thousand colors, yet the human mind cannot remember even one color with any degree of accuracy. The Spectrophotometer identifies millions of colors . . . measures, analyzes and memorizes them . . . writes its own exact and permanent record of any color sample.

While all pigments change with time, the curve plotted by the Spectrophotometer remains unchanged over the years. The original color could be accurately reproduced tomorrow or one hundred years hence for checking against your visual color standards.

But the precise measurement of color is only one of the many important contributions to printing ink progress that have come from IPI's broad program of fundamental research. Another is the development of new inks that have revolutionized letterpress printing and offset lithography. One example is IPI Vaporin Inks that heat-set in a split second and are largely responsible for today's high speed magazine printing. And there are the remarkable high gloss IPI flexographic inks for package printing—new inks for cellophane, polyethylene and foil.

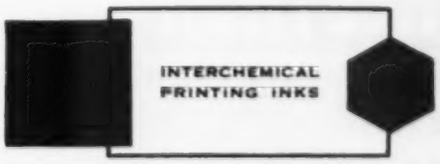
This "passion for improvement" is the working philosophy behind all IPI research. Scores of project groups are constantly at work in the IPI laboratories . . . concentrating all of their efforts on the development and improvement of printing inks that will best serve the changing needs of printers everywhere.

It is this IPI leadership in ink research that gives you the greatest assurance of continued high quality in printing inks. You can always rely on IPI—for better inks, better printing.

IPI, IC and Vaporin are trademarks of Interchemical Corporation

Interchemical

CORPORATION



Printing Ink Division • 67 West 44th Street, New York 36, New York

RELY ON IPI FOR LEADERSHIP IN INK RESEARCH

AT SPEED-UPS . . .

. . . AT SPLICES

AT SLOW-DOWNS . . .

color register is maintained AUTOMATICALLY!

No matter what your operating speed, your Hurletron Control will maintain accurate color register of all colors within a few thousandths of an inch. Even the most minute out-of-register condition will be detected and corrected instantly . . . before it is visible to the human eye. And it's all done automatically.

Think of the advantages. Pressmen are relieved of all register problems. Hourly production is stepped up. Waste is materially reduced. Costs are cut. And, of course, you turn out color work you can be proud of. Most important . . . you produce ROP color that your advertisers will like.

Would you like to know what users think of Hurletron Controls? Ask us for the names of some of them. Talk to them. They're our best salesmen. *Write today. There's no obligation.*

HURLETRON AUTOMATIC REGISTER CONTROL for R. O. P. Color

ELECTRIC EYE EQUIPMENT COMPANY

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Manufacturers of: Hurletron R.O.P. Color Registration Controls; Automatic Controls of Caliper and Weight on Paper and Board; Center Line and Side Web Guide Controls; Cut-Off and Back-Up Controls; Slitter Controls; Moisture Controls.

THE C&P LINE OF 37″ CUTTERS
provides unusual versatility
FOR FAST, ACCURATE CUTTING

C&P 37″
Fully Automatic Cutter

This model is fully automatic for both clamping and cutting operations. Push-button controls make operation easy, simple and fast. Two-handed control of cutting with a fool-proof non-repeat device meets all safety requirements. Clamp pressure is readily adjustable and clamp may be moved independent of knife. (A treadle is not necessary). Every construction feature contributes to safety, ease and speed of operation in providing the highest standards for precision cutting.

C&P 37″
Hand Clamp Power Cutter

All of the features of the 37″ Fully Automatic Cutter, except the automatic clamping device, are incorporated in the C & P 37″ Hand Clamp Cutter. The hand clamp construction makes possible a lower initial cost, but does not detract from the future possibility of fully automatic operation. The 37″ Hand Clamp machine *can be converted into a completely automatic cutter at any time by the installation of the automatic clamping power unit in place of the hand clamping device.*

Manual Spacer
for C&P 37″ Cutters

The C & P Manual Spacer is designed for work requiring long runs of repetitive cuts. The spacer enables the operator to make settings of several stops for the back gauge to accommodate a series of progressive cuts. He can proceed rapidly through the entire run without the necessity of stopping to make precise visual adjustments of the back gauge for each cut. Utmost precision can be obtained in making the stop settings. Extra bars and stop lugs can be furnished so that the same series of cuts is always available for future runs on jobs that are ordered periodically. This spacer is furnished as accessory equipment on C & P 37″ cutters and installed at the factory or by a factory man in the field.

Power-Driven Back Gauge

The C & P Power-driven Back Gauge is furnished as built-in accessory equipment on new C & P 37″ Fully Automatic Cutters. This back gauge cannot be installed on cutters in use. The power-driven feature of this back-gauge greatly reduces the number and extent of motions required to operate the cutter and faster cutting is accomplished. An automatic return feature which resets the back gauge for each successive lift of paper further materially reduces cutting time.

Before buying any paper cutter, check with your C&P dealer and get the full facts on the versatility, future adaptability and prices of C & P 37″ cutter models, or write us for complete information.

Where

comparisons are exacting

. . . as in the office of an agency space buyer, small differences in printing production may mean a contract or no contract.

It is easy for production to slip to dull, unalluring grayness and not always easy to bring it back to standard. Often a change to Certified Mats will impart just the clarity and sparkle that crowns a remedial program with success.

For dependable stereotyping, rely on Certified Mats

Certified DRY MATS

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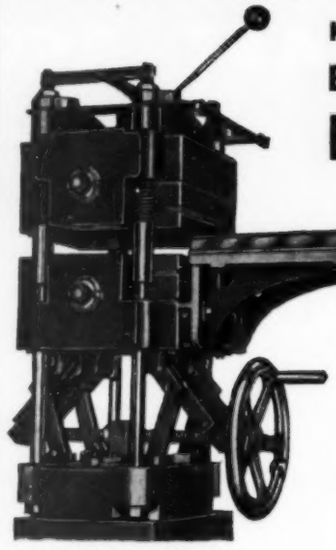
RUBBER PLATES

MAKE THEM IN THE EASY-TO-OPERATE

EVA-PRESS



Materials Cost Less Than $1.25 For 10"x10" Plate

1. Insert type form and plastic sheet into hot Eva-Press, apply pressure, let cure for 10 minutes.
2. Release pressure, extract all from Eva-Press and have finished matrix.
3. Place (1) sheet of rubber on (2) matrix and insert both into hot Eva-Press, apply pressure, let vulcanize for 10 minutes.
4. Release pressure, extract all from Eva-Press and have finished Rubber Plate. More detailed directions supplied with Eva-Press.

- **PLATENS 11"x13"**
- **INSIDE CHASE 10"x12"**

FOR MORE INFORMATION WRITE TO

AMERICAN EVATYPE CORPORATION

743 OSTERMAN AVE. DEERFIELD, ILLINOIS

Conference Dates

(With Organization Name and Correspondence Officer)

American Photoengravers Assoc. —1956 Conv., Hotel Statler, Detroit, Mich., Oct. 8-10. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf.—1956 Conf., Statler-Hilton Hotel, Dallas, Tex., June 4-6. Mgr., ANPA Mechanical Dept., Richard E. Lewis, 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute—1956 Meeting, The Plaza, New York, N. Y., April 5. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Fifth District Craftsmen's Conf. —1956 Conf., Hotel Cleveland, Cleveland, O., June 1-2. Secy.-Treas. Dave Walker, Adm. Asst., Graphic Arts Assoc. of Michigan, 320 W. Lafayette St., Detroit 26.

Graphic Arts Trade Assoc. Executives —1956 Conv., Edgewater Beach Hotel, Chicago, May 7-8. Secy.-Treas. Floyd Maxwell, LNA, 420 Lexington Ave., New York 17, N. Y.

Gravure Technical Assoc.—1957 Conf., Drake Hotel, Chicago, Feb. 6-8. Secy. Len S. Pinover, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conf.—1957 Conf., Statler Hotel, Cleveland, O., Jan. 13-15. Secy.-Treas. Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.*

Illinois Newspaper Mechanical Conf. —1956 Conf., Wolford Hotel, Danville, Ill. Sept. 28-29. Secy.-Treas. Arthur Kramer, Joiet (Ill.) *Herald-News.*

Intl. Assoc. Electrotypers & Stereotypers—1956 Conf., Hotel New Yorker, New York, N. Y., April 25-26. Exec. Secy. A. P. Schloegel, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen—1956 Conv., Biltmore Hotel, Los Angeles, Aug. 12-15. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19, O.

Intl. Graphic Arts Education Assoc. —1956 Conf., Santa Barbara College, Univ. of California, Santa Barbara, Calif., Aug. 5-10. Exec. Secy. Samuel M. Burt, 719 Fifteenth St. N.W., Washington 5, D. C.

Intl. Printers Supply Salesmen's Guild—1956 Conv., Biltmore Hotel, Los Angeles, Aug. 12-15. Secy. Louis A. Croplis, American Type Founders, 555 Broadway, New York 12, N. Y.

Intl. Typographic Composition Assoc.—1956 Conf., Royal York Hotel, Toronto (Ont.) Can., Oct. 10-13. Exec. Secy. Frank M. Sherman, 1015 Chestnut St., Philadelphia 7.

Iowa Daily Newspaper Mechanical Conf.—1956 Meeting, Hotel Fort Des Moines, Des Moines, Ia., April 14-16. Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf.—1956 Conf., Town House Hotel, Kansas City, Kans., Sept. 8 and 9. Kansas. Secy.-Treas. Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kans. Missouri Secy.-Treas. William A. Bray, Missouri Press Assoc., 220 Walter Williams Hall, Columbia, Mo.

Lithographers National Assoc., Inc.— 1956 Conv., Drake Hotel, Chicago, Ill., May 10-12. Exec. Dir. W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Newspaper Mechanical Conf.—1956 Conf., Lord Baltimore Hotel, Baltimore, Md., March 8-10. Conf. Dir. Theodore A. Serrill, PNPA General Mgr., 300-312 Telegraph Bldg., Harrisburg, Pa.

National Assoc. of Litho Clubs—1956 Conv., Lord Baltimore Hotel, Baltimore, Md., April 20-21. Exec. Secy. Elton N. Baker, 833 N. Orleans St., Chicago 10, Ill.

National Assoc. of Photo-Lithographers—1956 Conv., Hotel Commodore, New York, N. Y., Sept. 19-24. Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Printing Equipment Assoc., Inc.—1956 Meeting, Statler Hotel, Los Angeles, Calif., Oct. 20-Nov. 1. Secy. James E. Bennet, 140 Nassau St., New York 38, N. Y.

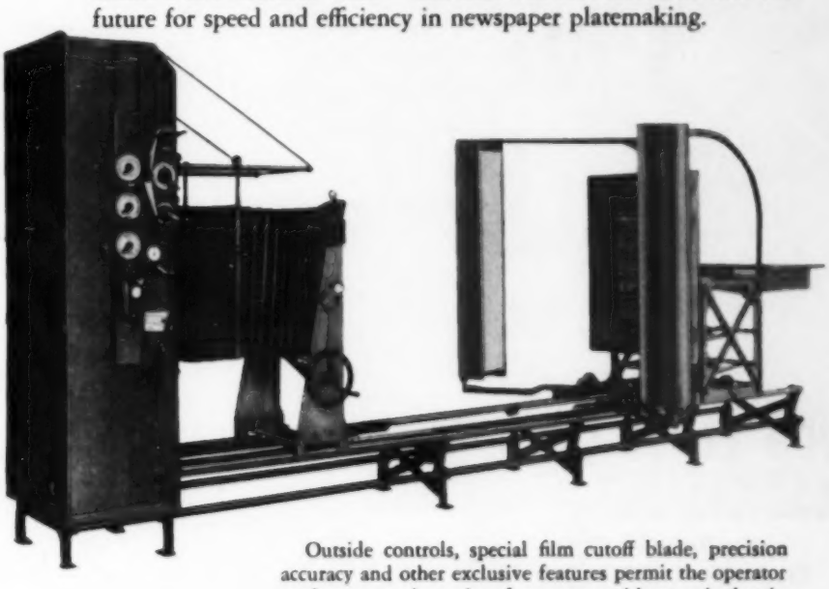
National Safety Council Printing and Publishing Section—Staff Rep. James

(Continued on Page 32)

Shortest, Fastest Distance
BETWEEN DARKROOM AND PRESS!

This Unique CHEMCO Combination

For 30 years, Chemco research and manufacture have anticipated and supplied the newspaper industry's requirements for ever-increasing pictorial coverage. From that continuing leadership now comes a new Chemco team — one that will set records far into the future for speed and efficiency in newspaper platemaking.



The Model F-1200 Roll Film Camera

Outside controls, special film cutoff blade, precision accuracy and other exclusive features permit the operator to shoot an entire series of exposures without a single trip to the darkroom. Using Chemco Paper Base Stripping Film, with its long range and sensitivity, you're assured high production of exactly right negatives to meet any deadline.

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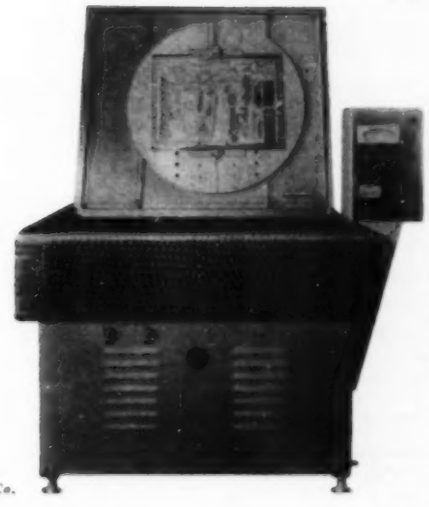

The Dow-Chemco Fast Etch Machine*

Uses the Dow Powderless Etch process—etches plates up to full page size—at a speed rate that keeps pace with the F-1200 Camera's fast negative production. Turns out high quality line and halftone work on magnesium without flat etching or powdering.

*Manufactured under license from The Dow Chemical Co.

Here's a natural team to save time in plate processing — because it eliminates so many of the old fashioned "stop-and-go" steps—providing new efficiency, economy and profit. Production moves swiftly and smoothly, and can produce up to *4 times more* plates than is possible with ordinary methods!

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"CAPCO" MULTI-CORE STRIPPER . . . A machine ENGINEERED to strip cores. Increases production as much as 400%. Many savings—will pay for itself out of savings.

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Conference Dates

(Continued from Page 30)

D. Saul, National Safety Council, 425 N. Michigan Ave., Chicago 11.

National Paper Trade Assoc.—1956 Conv., Waldorf Astoria Hotel, New York, N. Y., Apr. 9-11. Secy. J. H. Londergan, 220 E. 42nd St., New York, N. Y.

New England Newspaper Mechanical Conf.—1956 Conf., Statler Hotel, Boston, Mass., Oct. 20-21. Secy.-Treas. Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

New York State Capital District Mechanical Conf.—Dir. Floyd Laurenty, Schenectady (N. Y.) *Union-Star.*

Northwest Mechanical Conf.—Secy.-Treas. Ralph N. Carson, Linecasting Instructor, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis, Minn.

Pacific Newspaper Mechanical Conf.—1956 Conf., Biltmore Hotel, Los Angeles, Calif., Sept. 14-16. Secy. Fred Moyer, Sr., 6630 Mayflower Ave., Bell, Calif.

Packaging Institute Assoc.—1956 Conv., Statler Hotel, Cleveland, O., Sept. 10-12. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—1956 Conf., Statler Hotel, Los Angeles, Calif., Oct. 30-Nov. 2. Gen. Mgr. James R. Brackett, 719 Fifteenth St. N.W., Washington 5, D. C.

Research and Engineering Council of the Graphic Arts Industry, Inc.—1956 Meeting, Edgewater Beach Hotel, Chicago, Ill., May 9-11. Managing Dir. Robert E. Rossell, 719 Fifteenth St., N.W., Washington 5, D. C.

Screen Process Printing Assoc., Intl.—1956 Conv., Sherman Hotel, Chicago, Oct. 19-21. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf.—1956 Conf., The Dinkler Plaza, Atlanta, Ga., Aug. 19-21. Secy. John A. Hogg, Southern Newspaper Publishers Assoc., P.O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.—1956 Conf., Statler-Hilton Hotel, Dallas, Tex., June 4-6. Secy. Walter Johnson, jr., P.O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assoc.—1956 Conv., Eola Hotel, Natchez, Miss., Apr. 12-14. Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

Technical Assoc. of the Graphic Arts—1956 Conf., Edgewater Beach Hotel, Chicago, May 7-9. Secy.-Treas. Phillip E. Tobias, 140 N. 6th St., Philadelphia 6, Pa.

Progress Litho Expands

The Progress Lithographing Co. of Amberley Village, Cincinnati, O., has announced purchase of the plant of Kindred, MacLean & Co., Inc., Long Island City, N. Y. Operations of Kindred, MacLean will be continued and expanded at its present location. George C. Kindred will continue as president of the division.

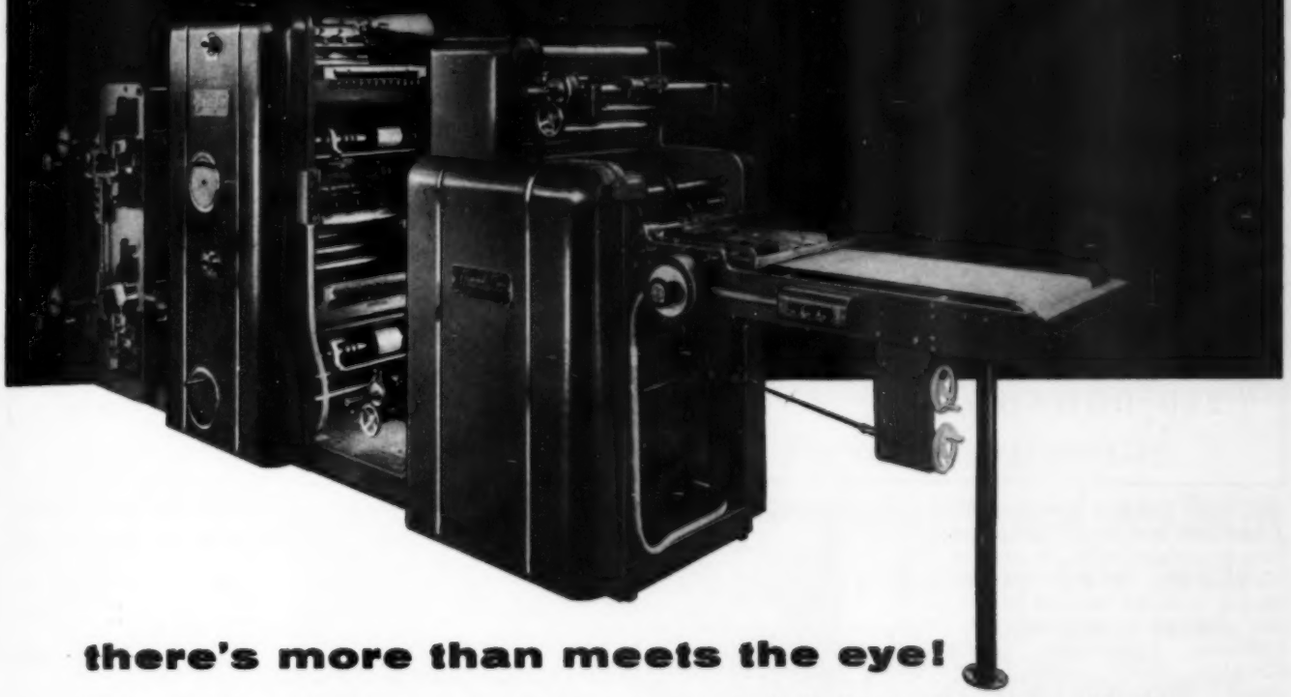
New equipment will be installed in the plant, including a 52 in. by 76 in. four color Miehle offset press. Existing presses include six two-color presses, three of which are also 52 in. by 76 in. The company will specialize in color lithography for users of Point of Sale, advertising materials, booklets, calendars, greeting cards, labels, wrappers and similar multi-color work.

Cincinnati facilities of Progress include a total of 12 color 52 in. by 76 in. offset presses. Complete platemaking and bindery facilities are utilized. Lithographic ink is also manufactured. Progress recently constructed a one-floor air-conditioned plant for R. A. Taylor Corp., another subsidiary, at Lebanon, O.

Annual Program Planned For Southern Conference

Plans for the 35th annual convention of the Southern Graphic Arts Assoc. and the 17th Annual Exhibit of Southern Printing are near completion. The event which

what's behind Speed-Flex?



there's more than meets the eye!

When you buy a refrigerator or a car, you consider factors beyond the equipment itself. For example, what is the reputation of the manufacturer? What kind of guarantee and service are provided? Are parts interchangeable and readily available? Is the manufacturer likely to go out of business, leaving orphan equipment without parts or service and a low resale value?

And when you buy printing equipment, you examine the same factors even more closely!

Consider the company that manufactures the Speed-Flex line, Western Gear Corporation. Established in 1888, the company today with its six plants is considered one of the nation's leading manufacturers of special machinery. Consider that $750,000 worth of interchangeable parts are carried in stock, all components of Speed-Flex equipment ready for immediate shipment when required. Check into the service record of Orville Dutro & Son, Inc., designers and sole distributors of Speed-Flex, with offices in Los Angeles, Chicago and New York, and with men in the field at your service whenever required. And, note that this service has been usually without charge, regardless of when the machine was purchased.

These are only a few of the things that constitute the unseen values behind Speed-Flex, the press that out-performs others as much as six to one and can double your stationery and form printing volume.

Write today for the Speed-Flex profit story!

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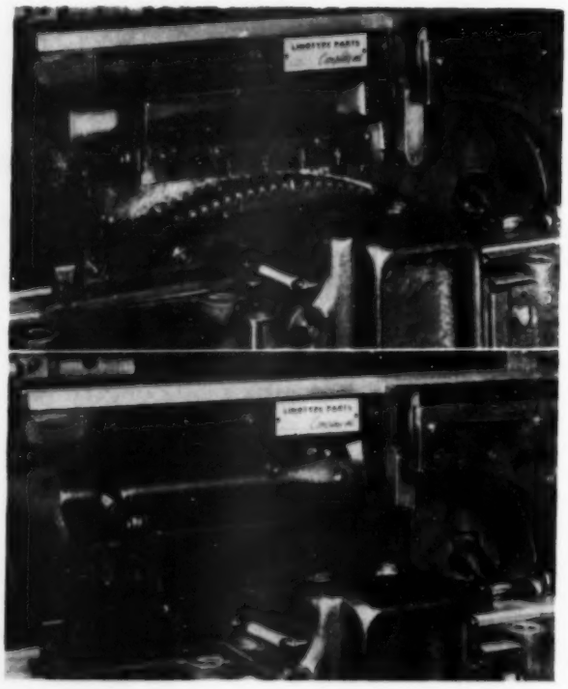
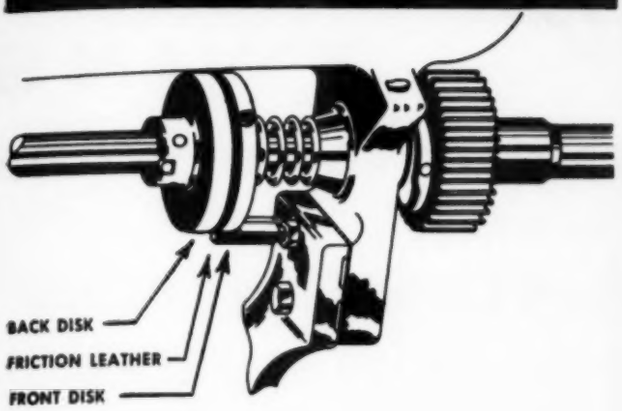
will take place in Natchez, Miss., is scheduled for April 12 through 14. Headquarters will be at the Eola Hotel. The tentative program includes opening session called to order Thursday morning by R. G. Graham, president, Southern Graphic Arts Assoc. Principal speaker addressing this session will be J. Richard Jackman, president, Printing Industry of America. At the lithography session the following representatives of the National Assoc. of Photo-Lithographers will speak: Rex G. Howard, president; Walter E. Soderstrom, executive vice president; Frank R. Turner, jr., cost accountant and Robert S. Emslie, secretary. O. F. Duensing, sales manager, Vandercook & Sons, Inc. will address the convention using as his topic: ***Minimum Make-ready Through Precision Form Preparation.*** Joseph McConnaughey of the Harris-Seybold Co. will be the speaker for the annual banquet.

Dow Etch Licensees Exceed 100—Licensees of the Dow Etch Process of photoengraving have passed the hundred mark, The Dow Chemical Co. announced. Twenty-seven newspapers and 70 commercial engraving shops in the United States and Canada and one newspaper and 10 commercial engravers in Europe have been licensed to use the process, according to the Dow Magnesium Dept.



Bonkrud Squirt Guard—The Bonkrud Squirt Guard states Star Parts, Inc., is a device for protecting the operator of a linecomposing machine from flying metal in case of a front metal squirt on Intertype or Linotype machines (shown in normal position in the upper illustration). The guard is fastened to the face plate of the machine in place of the usual mold disk shield just below the delivery slide track. The same screws that fasten the usual mold disk shield in position are also used to fasten the guard to the face plate. The device consists of two sections—a curved housing for the guard and a hinged hood. During first justification of the matrix-spaceband line, the metal pot moves forward to lock the mouthpiece against the mold. At this time a spring mounted rod on the pot cap and connected to the hood causes the hood to rotate downwardly to completely cover the justified matrix line as shown in the lower illustration. After the line has been cast, the pot retreats from the mold causing the spring loaded rod connected to the hood to raise the hood itself to normal position. In case the metal pot does not retreat the full distance to normal position, the first elevator flips the hood back to its normal position as the elevator rises from vise cap to second elevator transfer position. In case of a metal squirt, the guard hood swings upwardly into its recess and the machine stops because the matrix line cannot be transferred. The device is said to be noiseless in operation. For further details, please mention PEE No. 77 in your request.

At last! an Efficient Mold Disk Drive Shaft Friction For LINOTYPES



For the first time, an efficient Mold Disk Driving Shaft Friction is available for Linotypes. Located on the shaft, as shown, there is constant pressure exerted on the Friction Leather by the front disk. This constantly even drag provides controlled mold disk turning, and prevents back-lash when the mold disk stops.

The smoother, more positive action reduces wear on the mold disk, pinions and the studs and blocks as they engage for casting and ejection. This STAR attachment is easy to install, never requires adjustment, and the Friction Leathers can be replaced quickly if necessary.

Can be applied to all models of Linotypes and Intertypes. Ideal for high-speed operation.

Order by STAR PART Nos. F-3496 or S-320.

3260

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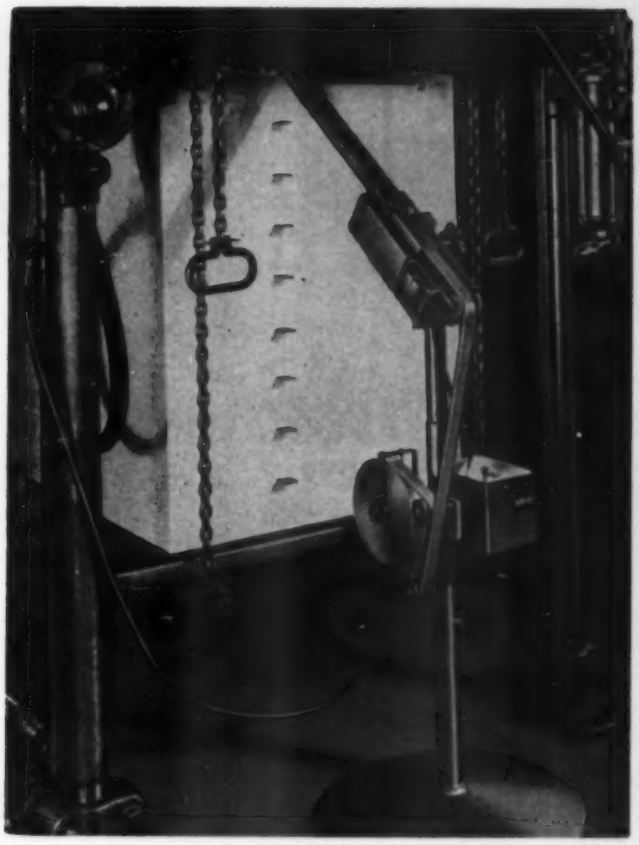

Portable Automatic

SHEET COUNTER and MARKER

for Press Delivery Skid Loads

- **Eliminates counting time—builds profits.**
- **Fits all press sizes and sheet sizes.**
- **Count set by simple toggle arm selector.**
- **Count easily adjusted for zero start.**
- **Count readily corrected for spoiled or pulled sheets.**

This compact, portable unit automatically *counts* and *marks* sheets being stacked at the delivery end of presses, sheeters, die cutters, etc. Costly hand counting is eliminated—absolute accuracy is insured.

The solenoid-operated counter is activated by a count pick-up switch on the machine, with uniform marking tabs inserted into the stack at pre-determined intervals. The standard counter permits marking sheets at intervals of 50, 100, 200, 500 or 1,000. For odd counts, a Cyclo-Monitor control is furnished, permitting selection of *any count interval* from 1 to 2,000.

Counter & Control now offers a complete line of automatic marker inserters for every type of job—general purpose or special. Compare your present sheet counting costs and the savings obtainable with one of these new units. Ask for recommendations (no obligation).

WRITE NOW FOR BULLETIN 401

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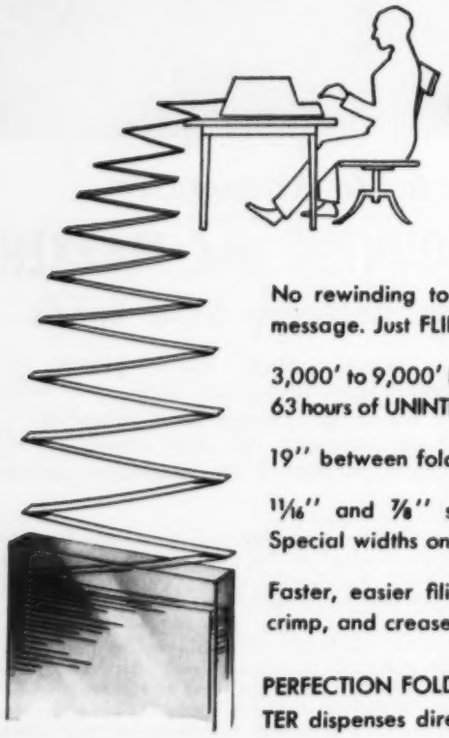
PERFECTION FOLDED TELETYPESETTER PAPER



No rewinding to get at start of message. Just FLIP OVER.

3,000' to 9,000' lengths give 21 to 63 hours of UNINTERRUPTED service.

19'' between folds.

$1\frac{1}{16}$'' and $\frac{7}{8}$'' standard widths. Special widths on order.

Faster, easier filing. No need to crimp, and crease.

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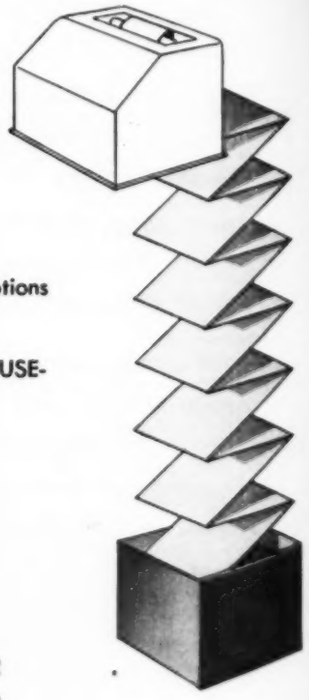
PERFECTION FOLDED PRINTER PAPER



Eliminates message interruptions due to roll changes.

Approximately 2850' of ALL USEABLE PAPER per carton.

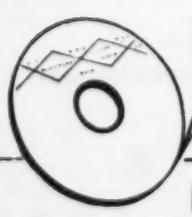
$18\frac{1}{2}$'' between folds.

Standard widths available.

Requires less storage space.

Canary, white, pink, green.

PERFECTION FOLDED PRINTER dispenses directly from carton.



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Skilled Craftsmen...
...Modern Equipment...
Pride in Quality Workmanship

This photograph shows a partial view of Quality facilities in Cincinnati. Modern plant—efficient equipment, yes . . . but the Quality organization prides itself on the precision and lasting value of its product for the carton industry.

All electrotypes contribute yeoman service and are essential but Quality Precision Electrotypes are made better for more exacting requirements. Quality service has been developed through the years and is geared to meet the unusual task for executives who are forging ahead. They welcome Quality's creative contribution.

One large carton manufacturer stated, "We can't *afford* anything but scientific, absolute accuracy in electrotypes. We are interested in end results—in the quality of the thousands and hundreds of thousands of impressions we make for our customers and the few dollars saveable by buying ordinary plates would be terribly costly."

Quality Precision Plates are custom-made, are more durable for long economical runs and stand up under terrific wear on all rotaries in use today, including the more recent models of Claybourn, Cottrell, Miehle, Harris Seybold, Sterling, Western Printing rotary attachment for two-color Miehles.

Watch production costs more closely than initial plate expense and you'll find the answer for the preference of Quality Precision Pre-makeready Electrotypes. The Quality story is especially interesting to carton manufacturers and complete information is available on request, without obligation.

Lead Mold
Nickeltypes
Plastic Mold
Copper Electros
Tenaplate
Chromium Plates
Bishop-Stansell Treating
(Pre-Makeready)

Flat or curved for all letterpress printing purposes

Positive Register Non-Stretch Cur

THE QUALITY

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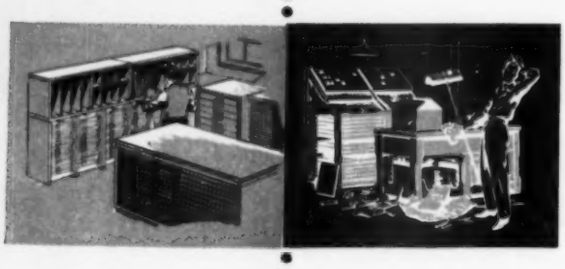

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Standard Colors For R.o.p. Printing

Report No. 7, *Recommended Standard Colors for Run-of-Paper Color Printing* has been issued by the ANPA-AAAA Joint Committee on Newspaper Printing. The report consists of 40 pages and cover, punched for loose leaf binder. In the report it is stated that the Joint Committee studied the color ink practices of more than 300 newspapers. Thus it was determined that a majority of these newspapers gradually adopted the same colors, including three and four color process printing. Objective of the brochure is to attain more uniformity of color results in all newspapers. In the report are recommended standard colors for run-of-paper color printing.

The standard colors reproduced in this report are scientifically identified by means of spectrophotometric curves and other specifications. An infinite range of color is available through use of the three process inks, nine toners and white for spot color.

There is an extended easily read discussion about the technique used in newspaper color printing including the procedure used for obtaining the spectrophotometric curves of standard inks. The various colors are each shown in 25%, 50%, 75% and 100% tones.

This is a valuable contribution to the technique of newspaper color printing. Copies may be obtained from American Newspaper Publishers Assoc., 370 Lexington Ave., New York 17, N. Y. Or you may request them from American Assoc of Adv. Agencies, 420 Lexington Ave., New York 17, N. Y.

Members of the Joint Committee preparing this splendid report are: Representing ANPA: James H. Armistead, Nashville (Tenn.) *Tennesean* and *Banner;* Amon G. Carter, jr., Fort Worth (Tex.) *Star-Telegram;* J. J. Eberle, Miami (Fla.) *News;* Earl J. Gaines, Pittsburgh (Pa.) *Press;* Henry Garland, Pittsburgh (Pa.) *Post-Gazette;* Joseph E. McMullen, Milwaukee (Wis.) *Journal;* Alex Primm, St. Louis (Mo.) *Post-Dispatch;* Fred Shafer, Chicago *Tribune;* Herbert T. Stanger, Boston *Christian Science Monitor;* A. H. Tolley, Philadelphia *Inquirer;* Earl R. Weiskittel, Youngstown (O.) *Vindicator;* Richard E. Lewis, manager, ANPA Mechanical Dept.

Representing AAAA: George B. Dearnley, McCann-Erickson, Inc., New York; Ernest Donohue, of Batten, Barton, Durstine & Osborn, Inc., New York; Eli Gordon, J. Walter Thompson Co., New York; Erwin A. Miessler, Needham, Louis and Brorby, Inc., Chicago; Richard Turnbull, American Assoc. of Adv. Agencies, New York, N. Y.

—it's another installation of drives and controls by *Cline Electric*

In one of the nation's largest newspaper expansion moves, the Chicago Sun-Times is ordering Cline-Westinghouse Drives and Controls—for the 30 Goss Headliner Units to be installed in their new building. It's another re-order for Cline Electric—further proof of Cline's consistent reliability and dependable, rugged performance.

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Literature for the Asking

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please ask for the pieces selected by number and send your request to Literature Dept., *Printing Equipment Engineer,* 1276 West Third St., Cleveland 13, Ohio.

Composing

BOOK FACES

A four page folder is available in which is shown block specimens of thirty 10 pt. text faces with their respective italic companions. The folder, entitled *Comparison of Weights of Intertype Book Faces,* is published by Intertype Corporation. Means of comparing the weight, count, color and relative legibility of text faces are provided. The folder is printed in letterpress on five varieties of book and coated stock. For a copy, please mention PEE No. 73L in your request.

PROOF PRESS

A four page folder on the Nolan Corporation Proof Press has been made available by Printers Rule & Supply Co. A short description of the proof press, which comes in three sizes, is included along with complete specifications. Also described is the Nolan steel cabinet available for all sizes of Nolan Proof Presses. For a copy, please mention PEE No. 74L in your request.

GOTHIC TYPE SPECIMEN

A type specimen booklet showing two series, Gothics No. 17 with 19 and No. 18 with 20, in four weights, has been issued by Mergenthaler Linotype Co. The booklet is 7⅛ in. by 10⅛ in., two-color, and contains 20 pages. These condensed gothics are considered suited for use in classified, fashion and pharmaceutical advertising, small box and label arrangements. For a copy, please mention PEE No. 75L in your request.

DISPLAY TYPE AND HEADLINES

ProType, a simple machine for setting display type and headlines photographically, is illustrated and described in a six page bulletin, published by ProType, Incorporated. One page of the bulletin is devoted to operational data. All headlines and display matter in the folder are set on ProType. ProType justified, letter-spaced, word-spaced, set on a curve or angle, and other typographic refinements are illustrated. For a copy, please mention PEE No. 76L in your request.

AD-ASSEMBLY CABINETS

Hamilton Cases, Racks and Bins along with a new line of Hamilton Ad-Assembly Cabinets are illustrated and described in a four page bulletin. Complete specifications are given of each of the cabinets and one page is devoted to custom made cabinets made from standard units. A floor plan for ad-assembly cabinets which shows how space can be saved and steps saved is included. For a copy, please mention PEE No. 77L in your request.

TYPE METALS

Federated process type metals are described in a two-fold leaflet published by Federated Metals Div., American Smelting and Refining Co. Constituents and qualities of Federated's Linotype, stereotype, electrotype, Monotype and Mor-tin metals are given. The Federated Metal Reconditioning Plan is described and one page is devoted to location of Federated sales offices. For a copy, please mention PEE No. 78L in your request.

REVERSE TYPE MATRICES FOR LUDLOW USE

Service Engraving Works, Inc. has available an eight page letterhead size bulletin descriptive of alloy matrices for casting reverse lines of type on the Ludlow. Examples of effects which can be secured are shown. Special made-to-order matrices of trade marks and the like are also discussed. For a copy, please mention PEE No. 108L in your request.

ENGRAVING ALLOY

A two color, 4 page bulletin has been released by Basil L. Smith System, publication engraver. The bulletin is descriptive of Smith's Rapid-Etch alloy to be used with powderless etching. The alloy is said to afford oxidation resistance, ease of handling and durability. The bulletin is descriptive of the advantages of the alloy and contains a comparison of Basil Smith prices for fine screen halftones, both old and new. For a copy, please mention PEE No. 109L in your request.

MAGNESIUM BASE

A two page price list with descriptive material has been released by The Monomelt Co., Inc. on its Monomelt Milled Magnesium for solid magnesium newspaper base. Base is available in single column widths and specified depths. Prices for special size Monomelt Magnesium are also included. The leaflet is also descriptive of Monomelt Magnesium Hearers for electrotype molding. For further details, please mention PEE No. 104L in your request.

Platemaking

USED PRESENSITIZED PLATES

A 16 page manual, *New Life for Used, Discarded Presensitized Plates,* for platemakers and pressmen has been compiled by Reproduction Research Laboratories, Inc. The 14 step RRL method for reclaiming used presensitized plate is described in detail along with description of RRL Plate Sensitizer and RRL Veneer. Also described and illustrated is the Handy-Andy mechanical brush for resurfacing presensitized plates. For a copy, please mention PEE No. 79L in your request.

ROYLE BEVELER

An eight-page, 8½ in. by 11 in., two-color bulletin is used to describe the John Royle & Sons straight line beveler. Generously illustrated, the beveler's features in detail are outlined in the bulletin. A table of specifications is included. For a copy, please mention PEE No. 80L in your request.

LITHOPLATE GRAIN GAUGE

The Sheffield Lithotest, a new type of air gauge developed by The Sheffield Corporation to provide an instantaneous, accurate measurement of the uniformity of the grained surface of lithographic plates, is the subject of a 4 page bulletin. The gauge consists of an air flow device which is placed on the grained surface of the plate, and a Precisionaire Instrument to measure the air flow across the surface of the plate. Illustrations and description of the gauge are included in the bulletin. For a copy, please mention PEE No. 81L in your request.

DOW-CHEMCO MAGNESIUM ETCHER

A 10-page, 8½ in. by 11 in., black and white, fold out bulletin has been released on the Dow-Chemco Magnesium Fast Etch Machine. Excellent halftone and line drawing illustrations are used to advantage in describing this piece of equipment. One page is devoted to describing the Dow Fast Etch Process. Another page is devoted to a detailed written description of the machine. For a copy, please mention PEE No. 82L in your request.

CHEMCO BULLETINS

A series of two-page, 8½ in. by 11 in. catalog page bulletins are available on various products of Chemco Photoproducts Co., Inc. These include bulletins on a plastic tray, ceiling safe light, negative viewer, temperature controlled darkroom sinks, stripping table, infra-red plate whirler, coating sink, cold grid printer, etching sinks, diaphragm and flow type plate coolers, burning-in oven and cooler, downdraft powder cabinet, chemicals, films, cold top enamel and developer.

(*Continued on Page* 89)

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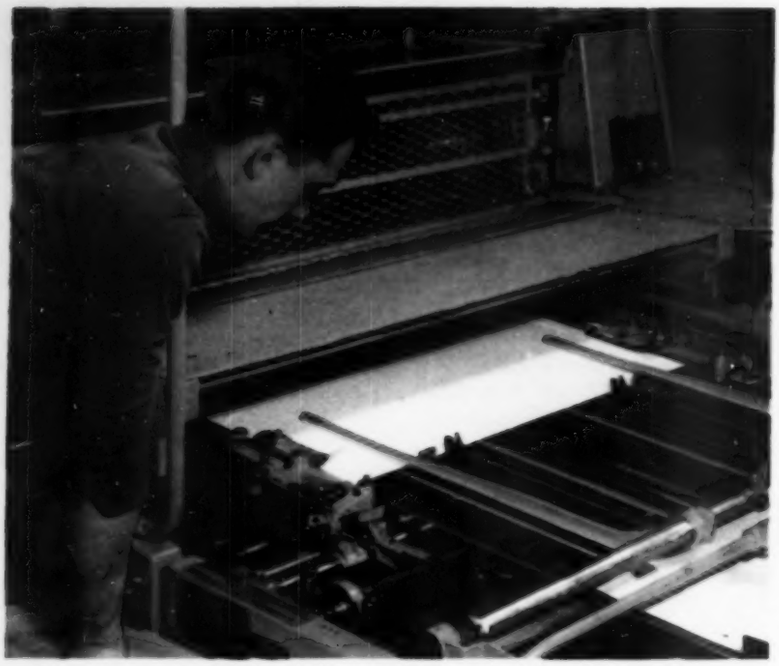

EACH SHEET is rear gauged and side gauged on the fly, at full press speed. Entire registering mechanism rides on a positively controlled carriage.

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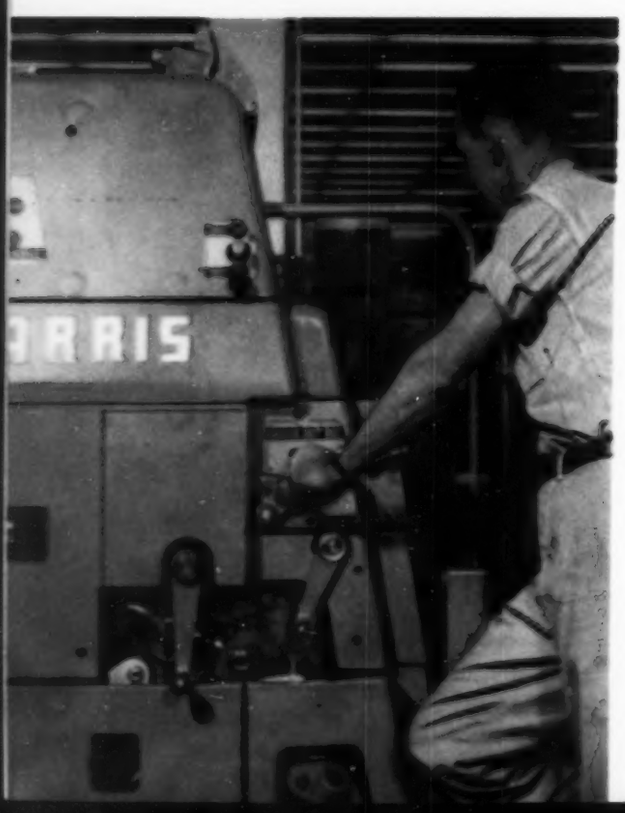
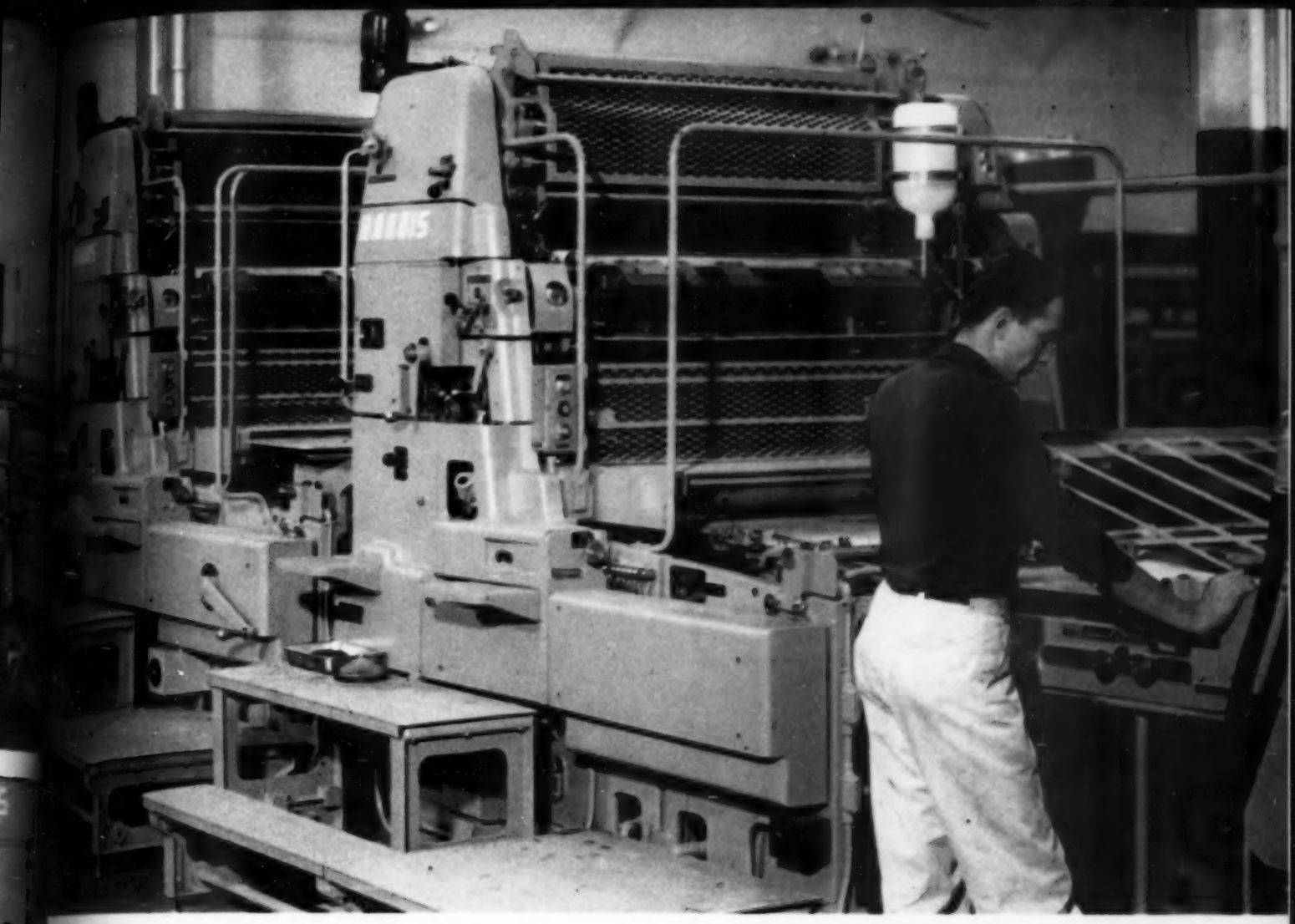


HINGED BRIDGE between printing units swings up at turn of crank, permits easy access to cylinders for makeready and adjustments.



Harris Model MDB, 36 x 43" two-color metal decorating press at Crown Cork & Seal Company, Philadelphia. Photos by William Richards.

May we tell you a little about the newest Harris offset press?

Once in a while a new product comes along that pretty well sums up the business philosophy of its maker.

This new metal decorating press is such a product—it's a good example of the way Harris-Seybold operates.

First of all, this press was not the work of Harris-Seybold alone. Leading metal printers worked closely with Harris engineers to develop it. As a result, this press is considered a major advance in metal decorating equipment.

For example, this model sets a new standard for accuracy of register in multicolor metal printing. Like Harris paper-printing presses, it prints from bearers. It uses the patented Harris multi-roll inker. It includes a number of improved magnetic and electronic devices for controlling the stock. And it operates at high productive speeds with ease and safety.

The engineering work on this press is measured not in weeks or months, but in years. The first press was not assembled until its components had been given exhaustive tests in Harris laboratories. Pilot models were installed in the field to further this research under actual production conditions.

Word of the new press model's fast, quality production has spread rapidly among can companies. Several are now in operation in different sections of the country. And more are under construction in response to the demand from the metal decorating industry.

Naturally, this pleases us. But our biggest satisfaction comes from knowing that this new press embodies the same careful planning, organized research, skilled engineering and meticulous craftsmanship that distinguish our paper-printing presses. We are proud to put the Harris nameplate on it.

Harris-Seybold Company, 4510 East 71st Street, Cleveland 5, Ohio.

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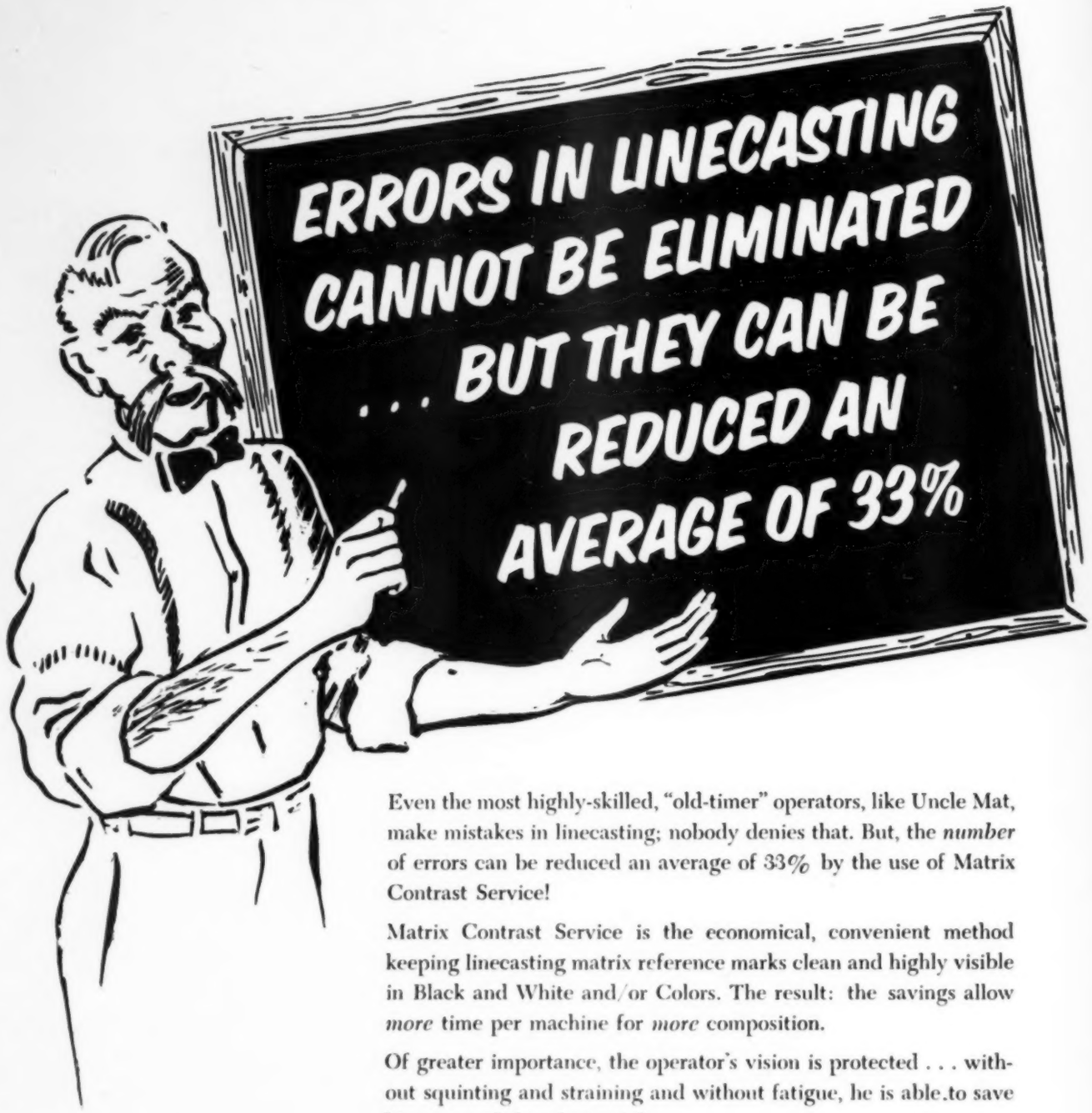

Even the most highly-skilled, "old-timer" operators, like Uncle Mat, make mistakes in linecasting; nobody denies that. But, the *number* of errors can be reduced an average of 33% by the use of Matrix Contrast Service!

Matrix Contrast Service is the economical, convenient method keeping linecasting matrix reference marks clean and highly visible in Black and White and/or Colors. The result: the savings allow *more* time per machine for *more* composition.

Of greater importance, the operator's vision is protected . . . without squinting and straining and without fatigue, he is able to save his eyes and do a better job.

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Materials Handling In Medium and Large Printing Plants

By ARTHUR W. ZIMMERMAN, Jr.

The first thought occurring to many printing plant executives when the subject of materials handling comes up, according to William (Bill) Feather, jr., general manager, William Feather Co., Cleveland, is movement of heavy materials and use of lift trucks. It is true that moving heavy materials is certainly a part of the problem. It is true also that lift trucks are valuable materials handling tools. But it's equally true that, at the present time and for the medium sized printing plant especially, the problem of handling the smaller, lighter loads needs attention.

Holding up an OK press proof can stop production on a press just as effectively as holding up a needed skid of paper.

There is another reason materials handling is an important, even though somewhat neglected, subject for printing plant production managers. In commercial printing plants, the size of the William Feather Co. and larger (Feather employs 229 people), the thinking of the production employees often tends to become departmentalized. That is, compositors tend to put all their thought and effort into getting the composition work done and proofs pulled. What happens to the type after that is sometimes a matter of little concern to them. The same tendency can be found among the engravers and other workers.

Though Feather is certainly not the only printing plant executive to become aware of these facts, he is unusual because of his energetic and sustained efforts to do something about them. He believes that many medium sized plant operations comparable to the William Feather Co. can greatly improve their efficiency by attending to the perhaps less glamorous but more critical parts of materials handling.

Teaches Individual Responsibility

The beginning point in a practical materials handling program for the medium sized printing plant, Feather feels, is to start instructing each man in the plant to be aware of his relationship to the materials handling of the plant as a whole. Said another way, each man should be shown that only a job which goes through the entire plant quickly and efficiently, rather than one that merely clears his department in a reasonable time, can be said to have been well handled. For example, the men in the plate mounting room at the Feather Company had to be sold on the fact that, though Vandercook Lite Base requires more care in mounting engravings, the additional time required is well worth it through reduced makeready after the job gets on the press. This is a gradual procedure; improvement should be expected to come slowly.

Right here is not too early to mention two very human characteristics of printers. For one thing, as soon as printers (or almost anyone for that matter) see an open, clear aisle, they seem to want to put something into it and fill it up. At the Feather Company supervisors constantly remind workers to keep the aisles clear. This procedure, combined with wide aisles to begin with, permits the firms to get along without painting a single line on the floor in the entire plant to mark an aisle.

The other characteristic of printers to be mentioned here is that they seem to hate to throw things away. An example of this is the Feather Company pressmen who have brought all their bulky four-legged tables from the old plant and placed them in the aisle between the delivery end of the cylinder presses and the outside wall. Eventually these obstructions will be replaced with fold-out tables which can, when it is necessary to move a skid of paper away from the press delivery, be dropped down against the wall. Other potential aisle cloggers, such as the rolls of press packing paper, will either be carried on movable units or mounted in brackets on the wall.

Materials Handling Defined

"The definition of good materials handling which we use at the William Feather Co. probably wouldn't satisfy the academic student of the subject," says Feather. "But we've found that in the 10 years we have been actively pushing the campaign to improve handling that our definition is workable and understandable.

"To us, good materials handling is doing everything the easiest possible way.

"From this statement it can be seen that we consider good materials handling to be a frame of mind rather than the collection of a lot of individual techniques. Techniques, such as conveyorized, straightline handling, and maintaining the shortest possible distances between work stations, may be right in one case and wrong in the next. But the search to do things the easiest possible way will always result in the most efficient handling.

"We did not believe, when we laid out our new Clinton Road plant in Cleveland, that we would

solve all of our handling problems at one time. We realize that a constant campaign to improve is required. But we were able to do some things when we went into the new one-story plant."

Laying Out the Plant

Feather Company began planning its new plant by laying down the major materials handling-workflow line from the paper storage area to the presses, to the bindery and then to the shipping department (See flow line A on the accompanying flow chart). We also provided a minor (but no less important) workflow line from the composing room area to the imposing department, to the presses (See flow line C on the accompanying flow chart). The company realized that most traffic and materials would flow along these lines and that where the two lines intersected would be the center of flow or activity of the plant. It located the imposing area as close as possible to the presses and the tributary departments and equipment were arranged adjacent to these main materials handling lines.

Olin E. Freedman, management consultant, who was called in on the design of the new William Feather Co. plant, puts it this way: "Printing activities are concerned with a multiplicity of made-to-order jobs moving forward concurrently . . . undue attempts to create straightline conditions too frequently result only in unnecessarily great distances between work centers requiring close liaison and in excessive use of expensive floor space . . . There can be no valid objection to the intersecting or even the crisscrossing of the lines along which work (and material) moves, or even to movement in both directions along a given aisle, provided that such an arrangement results in the greatest potential elimination of waste or superfluous motion and in the holding together of various work centers as cohesive, highly productive units."

This is the main aisle at the William Feather Co. plant. This view is from the paper storage end of the plant, looking down past the job press department on the near right and bindery on the near left toward the cylinder press department on the far right. This is the aisle which William Feather, jr., general manager of the Feather Company, says is being kept open and clear. Note the maple flooring and skids of work in process. Note also the skid loads of paper in the background ready to go on the cylinder presses.

"Let me repeat one point," says Feather "because it is important: We, the management at the Feather Company, consider the imposing area as the nerve center of the plant. Everyone works toward the makeup tables; the plant is laid out to make it easy to get forms and information to and from this area.

Plant Traffic Manager

"We have gone one step further. The imposing room foreman acts as a sort of traffic manager for the whole plant. The composing room foreman faces the problems of multiplicity of hand operations. The pressroom foreman is primarily concerned with keeping the presses running smoothly. The bindery foreman doesn't come into the work and materials control picture until it's too late to do anything about it. So we set up the imposing room foreman as the controlling agent.

"We put the makeup tables as close to the presses as we could get them, not only for the physical closeness, but also because we wanted the makeup men to become imbued with the pressroom idea of production.

"This arrangement does away with OK form proofs lying on the makeup table for an hour or two while the comp super answers the phone or any of the multitude of questions coming from his men. As general manager of the plant, I have the overall picture of the plant operation and business, but I have to talk to the imposing room foreman to get the latest details—and I do, everyday."

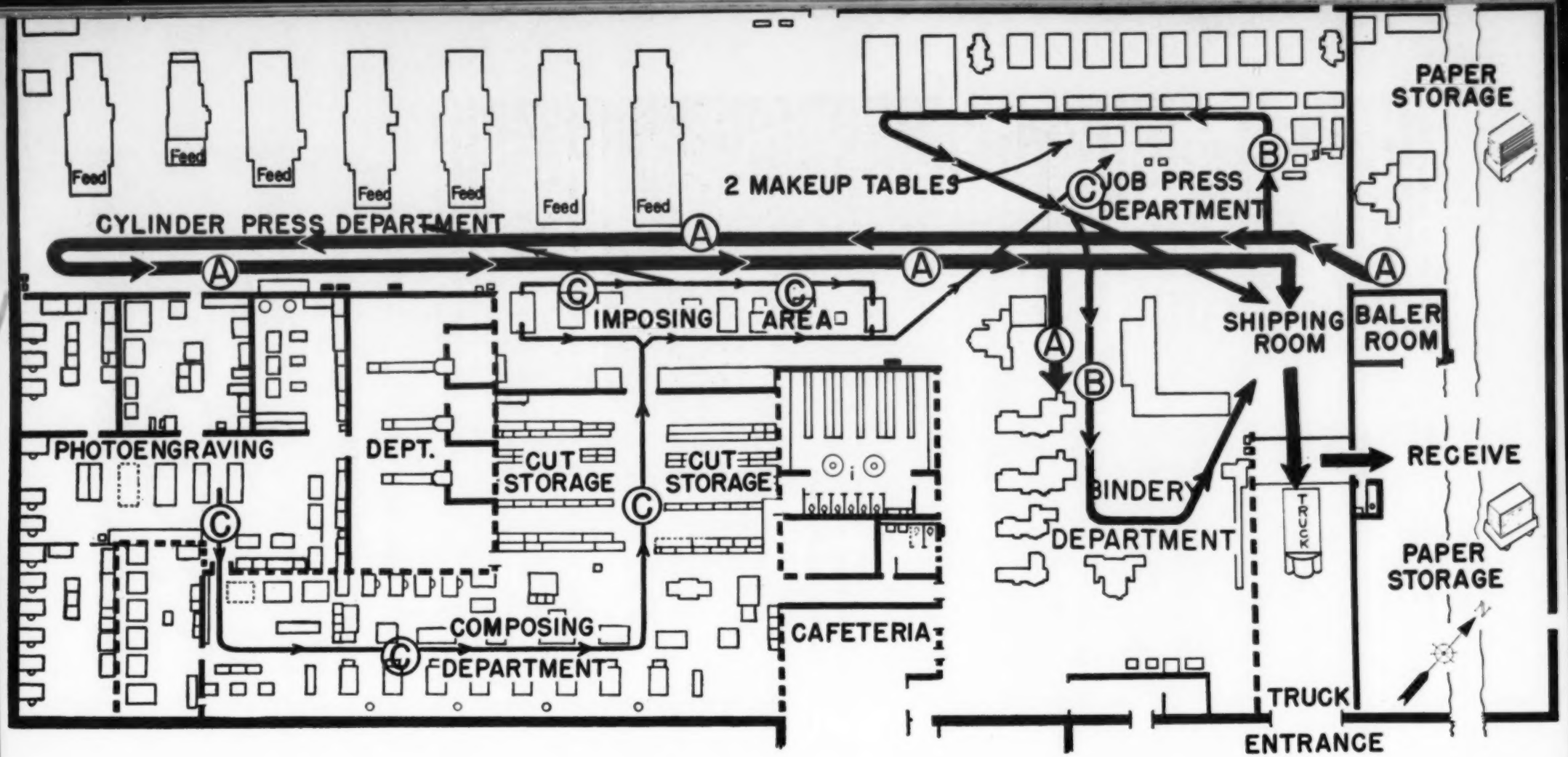
Maple Floor Expedites Handling

From the ground up, the next handling feature of the new plant is the maple wood flooring. The company went to the expense of installing this flooring for three reasons: First, for comfort. People are more comfortable walking on wood. That makes it easier for them to do their jobs well. Secondly, for ease of movement. It believes it is easier to move skids and trucks on a wood floor. Again this makes it easier for our people to do their jobs. Third, and finally, for ease of maintenance. Feather believes it is easy to keep the wood floor clean and clear of debris. Also a clean wood floor tends to discourage anyone from throwing trash on the floor. A clean floor is very important to good materials handling.

Service Employees

"We have three men, by the way, whose full time job is to keep our plant clean," says Feather, jr., "these men are not porters. They

(Continued on Page 104)



Material and Work Flow Lines of the New William Feather Co. Plant, Cleveland

This diagram shows the how and why of materials flow in the new William Feather Co. plant. Line A begins in the paper storage area. This is the paper supply line to the job press department (line B) and the cylinder press department. Line A also is the line of materials flow back to the bindery from the cylinder press department. Line B goes to the job presses and then to either the shipping room, if there is no trimming or folding to be done, or to the bindery. Line C is the material flow line from the engraving and composing departments to the imposing area. This flow line is considered secondary only to the main flow of paper from the paper storage to the cylinder presses. There is a spur extending from flow line C to the makeup tables in the job press department. Composed material is carried by galley trucks to those tables to be made up into press forms.

FLOORS

In the Printing Plant — Parthenon Press, Nashville, Tenn., Uses Seven Kinds—Rubber-tired Trucks Reduce Floor Maintenance.

By P. R. RUSSELL

One of the major problems in a printing plant is that of the installation and maintenance of satisfactory floors. In the Parthenon Press plant, largest of its type in the South, here at 815 Demonbreun St., Nashville, Tenn., we have *seven* different kinds of floors to meet varying conditions in different departments. It is difficult to see how the number could be reduced.

Floors range from the bathroom style of tile in washrooms to a specially constructed, acid-resisting floor in the foundry tank room, including the surface-treated roof parking floor. Perhaps not all of the different types of floors are absolutely necessary, but there are good reasons in each case.

Maintaining an employees' parking space, sufficient for 400 cars, on the roof of the building, calls for a floor with all expansion joints sealed as well as surfaced against skidding. Fresh applications of Hallumite are made at frequent intervals as it will wear and wash away. Ascending and descending ramps to the roof parking area are reinforced concrete without surfacing, but considerable wear is already evident after a little more than two years. Heating of ramp surfaces is possible through hot water or steam pipes.

The entire main working floors consist of pine blocks over concrete with no binding medium. The floor in the older section of the building, except in aisles where there have been replacements, has been in service since 1924 with little sign of wear. It is the consensus here that wood block floors are less tiring to workmen who have to stand or walk a great deal.

Saving Floors With Rubber Tired Trucks

In recent years the plant maintenance department has discovered that by using only rubber-tired trucks for transporting work in process there is no longer any wear of the blocks in the aisles. This has meant a considerable saving in time and materials.

The problem of oil dripping on the wood floor was solved effectively by placing sheet metal pans under each machine in pressroom and bindery, where there was a possibility of oil migration. The bottom of the pan rests on the concrete with flanges turned up against the wood blocks surrounding. The metal underneath small presses, all press feeders and some other smaller machines, however, are flat resting on top of the wood floor.

Since the upturned flanges are necessary to confine any amount of oil until it can be wiped up with waste by porters, the question of whether the pan is flat or is sunk with a flange depends on the amount of oil drippage under a machine.

Reducing Fire Hazard

Oil damages floors, particularly wood, and the pans are not only the surest protection, but the hazard of oil fires is greatly reduced by use of the pans. The Parthenon Press has not had a notable oil fire since these installations.

Installing Pans

These metal pans are, of course, easiest to install when a machine is being originally installed or an old one is being moved. But it will pay to lift the average on jacks and install pans. While a heavy press is raised, run in melted lead footings if other types of footings are being used. The Parthenon Press tried other footings before using lead.

In our plant, where electric conduits are to be run in the working areas, blocks are cut in the concrete, the conduit laid in the trench and concrete is poured in to fill up the space.

Reflooring Foundry Tank Room

The foundry tank room floor was made of unsurfaced concrete when

The Parthenon Press, Nashville, Tenn., maintains a roof parking floor with up and down ramps for 400 employee cars. Frequent applications of Hallumite are necessary to provide sealed expansion joints and also a nonskid surface during wet and/or rainy or cold weather.

the plant was remodeled. In two years time the floor had to be remodeled. Copper sulphite and other acids, splashed from the tanks onto the floor when removing molds, had done plenty of damage to it. Experience of another plant of a different type—du Pont's Cellophane manufacturing plant near Nashville where even stronger acids have to be dealt with—was relied upon and a 1½ in. mixture of silica flour, silica sand and asphalt was laid over the concrete base. At the du Pont plant this type of floor has been used with minor repairs for more than 35 years.

The remodeled Dixie Electrotype plant in Nashville is supplied with this type of floor in tank room and other areas where acid-resistance is necessary. The contractor who installed it guaranteed this floor will stand a 320 deg. splash. The melting point is 200 deg. F.

Basement Floors

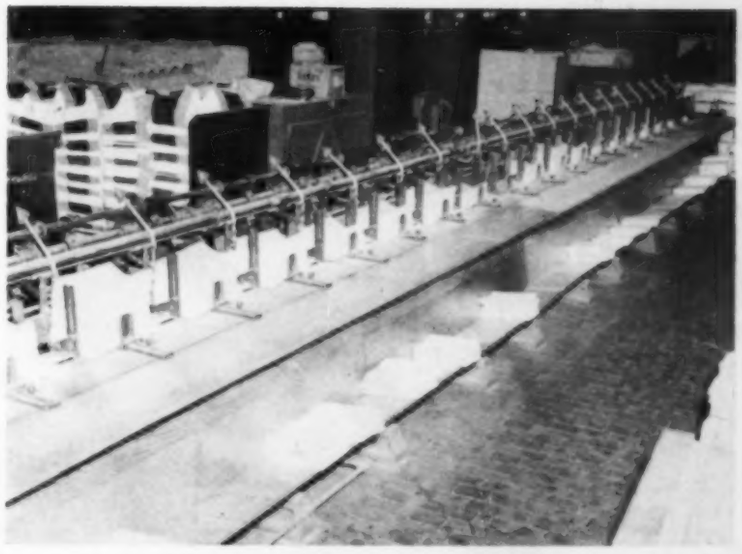
The floors in the basement and sub-basement areas of the Parthenon Press plant, largely used for storage, are of concrete without surface treatment. Maintenance and repair costs on this type of floor has also been greatly reduced since adoption. Rubber-tired trucks are used in handling all stock and materials. Small sections of these floors are covered with rubber mats where workmen stand as in the mailing and Addressograph departments.

Offices and Hallways

Floors in offices and hallways are covered with linoleum blocks. This floor facilitates daily cleaning and is less expensive in replacement cost. Entrance and lobby to the first floor and to the offices are of marble which, incidentallv, has shown noticeable wear since being installed in 1924. There are altogether seven kinds not including small sections of wood flooring in use in some small areas to keep workmen's feet off the concrete surface.

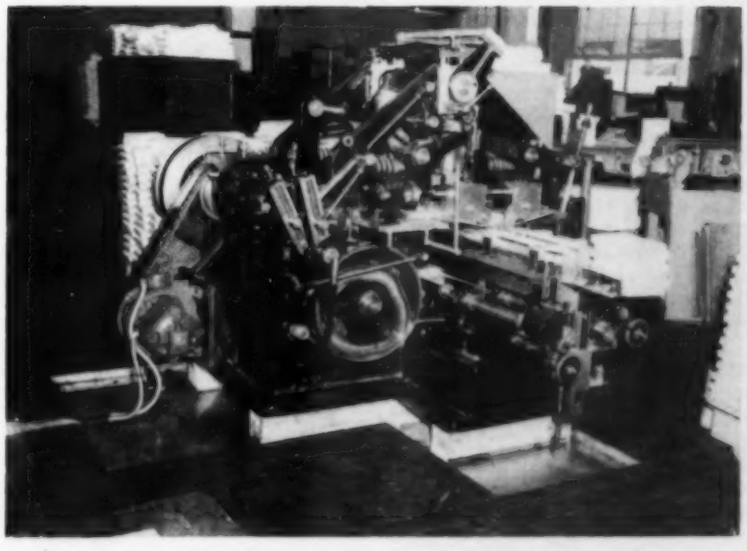
There are probably plants with an even greater variety of types of floors—all for good reasons—but the Parthenon Press plant is a good illustration of printing plant floor treatment. Of all the types, the wood block workroom floor with the metal pans and the acid-resisting silica and asphalt floor surfacing in the electrotype foundry tank room are the most important.

Owners and maintenance men have learned in selecting plant floors to consider the upkeep as well as the original cost. Unsuitable floors can slow down production and take the will to work out of employees.



Metal pans, with and without flanges (according to frequency of oiling) are placed under all machines such as this one in the bindery and including pressroom at the Parthenon Press, Nashville, Tenn. Oil flowing from bearings is wiped up at regular intervals. The pans eliminate fire hazards in different departments and good housekeeping is promoted.

In the plant of the Parthenon Press, Nashville, Tenn., book, publication and commercial printers, the pine block floor in this section of the composing room has been in use for more than 30 years. Foot traffic is concentrated in this area where temporary galley storage is kept.



View of gathering machine in section of bindery, Parthenon Press, Nashville, Tenn. Parthenon executives feel that wood floors are much easier on feet and legs of working men and women.

What Plant Executive Should Investigate When Planning Move Into New Plant

When the plant executive is considering plans for a new plant, either a brand new building or a move into an existing building in a new location, there are a number of items which should be considered—before the plant is moved.

In an article of this kind, it is not possible to present an exhaustive list of items that should be considered. However, what amounts to a superficial list of major elements needing attention will be mentioned. By all means, discuss every phase of the newly planned plant with and be guided by your architect and/or engineer. After all, it is not as costly to make proper plans before the move rather than attempt to correct planning deficiencies after the move has been made. It is your business to produce printing at as reasonable cost as possible—and it is the engineer's business to help your company do that very thing.

The items to be considered are not set down in progressive order because in some instances, a number of them can be dismissed by the plant executive as not constituting problems because they have already been provided for.

Insulating Qualities

There is hardly a doubt but what an expanded floor area will be available in the new building. Especially in areas where the winter climate is apt to be severe, it would be just as well to look into the insulating qualities of the building.

What type of heat is available?

How will ventilation be provided?

Will there be windows in the proposed new building? Discuss them with the architect and/or engineer to determine what effect they will have upon the heating system. Also, what will be the effect if the windows should be opened in any of the departments during warm days for ventilating purposes. Of what value are windows for daytime lighting? Should shade be provided at the sunny sides of the building?

Air Conditioning

Is air conditioning to be installed? Will it be overall or unit type? In certain departments, what temperature and relative humidity should be maintained? Particularly, in pressroom, bindery and paper storage areas, what are the requirements? If air conditioning equipment is not to be provided, what can be done to humidify or dehumidify departments where necessary?

Pillars and Partitions

A study should be made regarding spacing of pillars and partitions (if any) in a newly acquired existing plant. This with respect to machine location, interference with workflow and materials handling. Can pillars and walls be removed without weakening the roof or upper floor supporting structure?

Floors, Walls, Ceilings

Floors, walls and ceilings are of utmost importance in plant planning. There are a number of different types of floors which can be installed in various types of plants. According to the mechanical department in which they are to be used, will it be necessary to employ different kinds of wood flooring for different departments? For instance, in a photoengraving or electrotype department; are the floors acid-proof? In the stereotype department, with the flooring withstand movement of metal trucks and/or plate trucks? What type or types of flooring should be provided in the pressroom? Should portions of the floor consist of "armor plate" or non-slip plate? In the composing room, should wood block, dustless cement, mastic or "boiler plate" flooring be installed? What type of flooring is best for the bindery or the shipping room? What kind of floor should be provided for the paper storage department?

Lighting

Wall and ceiling paint should receive maximum consideration. This goes inextricably with artifical or natural daylight if any. In other words, no consideration should be given paint and lighting qualities without tying the two together. Give every consideration to desirability of localized and general lighting

for certain types of seeing tasks throughout the plant.

Workflow

Literature on the subject of workflow has been prepared and distributed frequently over a long period of time. Give the subject your most serious study. "Straightline" workflow, defined simply, is that as work progresses through the plant it should move forward at all times. The forward movement may take the shape of an N, U or Z, or perhaps some crazy pattern. That's immaterial so long as the work moves ahead without sidetracking or inhibiting the workflow behind it. There is much to be said for economy in movement through the plant, both of work in process as well as conservation of human energy.

Materials Handling

Of prime importance is the subject of materials handling in the printing plant. Give every consideration to such simple items as bringing ingots into the composing room for type and/or linecasting machines. Movement of plates from one department to another, movement of forms to and from the press, movement of paper stock from paper storage to press, to bindery, to shipping room. Note the combined materials handling-workflow arrangement in the William Feather Co. plant on other pages in this issue of *Printing Equipment Engineer*.

Dispenser for Fast Handling Of Like Items

More and more, plant executives are adopting the rolling table and conveyor idea to plant production. One of these work simplification items coming to the attention of *Printing Equipment Engineer* is a work height compensating device. It is possible that plant executives may bend the idea to suit their own particular production requirements. This mobile piece of equipment is called AMF Lowerator Truck-Dispenser. Its greatest use is in plants where production collating and/or bindery require continuous runs of similar items. The prime uses are for loading the Dispenser at the paper cutter and then transporting the trimmed load of books or pads to the mailing and shipping departments. In both instances, the self-leveling shelf with its variable weight load is maintained at any constant height such as 40 in. from floor level. This put-on or take-off at constant level permits rapid handling of items and reduces worker fatigue.

The lowerator self-leveling work positioner is furnished by American Machine & Foundry Co. in several modified models. On one of the models the base is 20 in. wide by 26½ in. deep, supported by 3 in. hard rubber faced casters, the rear two of which are swivel mounted. Mounted towards the rear of the base is a column, 20 in. wide, approx. 6 in. from front to back, and 40 in. high.

On the front side of the column is mounted an adjustable shelf, 18 in. wide and 14 in. from front to back. To permit vertical movement of the shelf on which the work load is deposited, two eyes project from the bracket part of the shelf through the slots. The eyes are connected to a chain mounted on two sprockets inside the column to permit vertical movement of the shelf. In turn, each chain is connected to an extension coil-spring. When the platform, or adjustable shelf is unloaded, spring tension keeps it at the top position. As the shelf is loaded, the shelf is lowered proportionately —gravity's pull being counterbalanced by spring tension. As additional lifts are placed on the shelf, the shelf is lowered while the top layer of pads remains at the pre-determined working height of 40 in. Now, after the Lowerator is transported to the mailing and shipping station, and the pads are removed as indicated for shipment, the action is reversed, the top layer of pads is moved upwards automatically to the pre-determined working height of 40 in.

In one plant the average pile height of pads is 15 in. Weight of average pile is 84 lbs. The load is removed in layers of about 1 in. at a time which is equal to about 7 lbs. per layer in.

For further details, please mention PEE No. 82 in your request.

DAVIDSON KLEINSCHMIDT HAMILTON DeNORMANDIE

Miehle Announces Personnel Changes—The appointments and transfers of several key men has been announced by Carlton Mellick, vice president of sales, Miehle Printing Press and Mfg. Co. John F. Davidson is now manager of the St. Louis, Mo., territory. Davidson, formerly manager of the Washington, D. C. territory, is replacing Ralph Kleinschmidt, who has been reassigned to Chicago, operating out of the Miehle home office. E. Hale Hamilton was appointed the new manager of the Washington territory. Hamilton was formerly the Miehle representative in Cleveland. Thomas F. DeNormandie was appointed manager of the Cincinnati, O., territory. He is being transferred from the Minneapolis, Minn., territory.

WALZ

Dudley Walz, Eastern sales representative for the Graphic Arts Corp. of Ohio, has been named to the position of general sales manager. Walz has been allied with the Graphic Arts industries since 1929 and prior to joining the Graphic Arts Corp. was production manager for the New England Printing and Lithographing Co.

Searching Analysis of Newspaper Composing Room *Costs*

By HARRY EYBERS*

**Production Manager, Washington (D.C.) Post and Times-Herald. Abstracted from address delivered before Great Lakes Mechanical Conference, Milwaukee, Wis., Jan. 1956.*

PART I.

I believe the method used by most newspapers to obtain page cost is to divide the number of pages carried in the city or home edition into the composing room payroll. When figuring page cost some newspapers use just the payroll of the journeymen and apprentices. Others include supervisory employees. Some include the janitors or janitor services, the general operating cost and depreciation on equipment and building. Vacations make it even more confusing. Some include it and some don't. But even when they do, there is hardly a city in the country where vacation time allowances are the same. They vary from one week to as high as four in one year. Some newspapers do not have to replace the manpower during vacation periods but others do, either from press of business or by contract agreement. If press of business demands the replacement and there are no subs available it means overtime. Some newspapers have sick leave agreements in their labor contracts and some don't, but even where they do some are broader than others.

The number of hours in the shift is certainly important. The hours vary all over the country, from as long as 8 hrs. to a low of 6 hrs. on some shifts. Not all newspapers have the same penalty pay conditions nor the same holiday pay conditions or even the same number of holidays recognized in a year. Afternoon papers naturally have more working hours during the day, the morning paper more during the night hours. I am sure we all know the difference between the day and night rates. Even that differential is not the same all over the country. Some papers are forced to use a lobster shift at a still higher rate of pay.

The availability of manpower is not the same around the country. In some sections men move in and out with the seasons. Some always have a surplus of manpower, but in other sections it is the very opposite, with excessive overtime and penalty shifts necessary to get the work out. Last, but not least, we certainly all know the pay scales are not the same all over the country. These are just a few of the expenses to be charged to page cost. These conditions might not have a bearing on the hours per page or per column but they certainly do on the monies.

Breaking Down Costs

Now, let's break down the mechanical costs of operating a newspaper composing room. Setting the type to fill the news hole represents a major part of this cost but the operation is different on nearly every newspaper. First of all, the column width is not the same, ranging from 11 picas to 12 picas.

The depth of the column is controlled by the press cutoff. There are at present three cutoffs principally used on newspaper press equipment—21½ in., 22¾ in. and 23⅛ in. This means on the form size there is a difference of 2 in. from the shortest to the longest column depth. I don't think I have to tell you that means 2 in. more of type to set on each column or 16 in. per page. That's a lot of type on any newspaper, regardless of size. For illustration, take a newspaper composing room producing 400 pages per week without any makeovers. This means setting nearly 288 col. more on the newspaper with the long cutoff as against the short, or a total of 36 pages. That, in itself, would throw off any cost comparison between newspapers with different column lengths.

Naturally, the answer to this would be not to use column cost but to break the cost down to the column inch. However, there are many other operating conditions that make this impossible. The number of editions and the time these editions are scheduled to come out also have effect on cost. Some newspapers in non-competitive cities have nearly an entire shift to get out the first edition and hold the makeovers on the following editions to a minimum. Thus it only takes one shift to get this work out or at least just a small shift over the main one.

In the Competitive City

Newspapers in more competitive cities are forced to have a paper on the street at about the same time the main shift starts to work and the balance of the editions are spread out throughout a period of sometimes 10 to 12 hrs. This usually means a paper is nearly made over entirely from the first edition to the last, taking two or more shifts to get it out. Yet, both newspapers could have the same number of pages in the city editions and the same size news hole but the latter paper would have to fill the news hole twice.

Type Composition

The newstype dress, makeup style, news deadlines, number of editions and makeovers, or the newspaper's general makeup policy also have a terrific bearing on cost per page. Many different sizes of news type are used by newspapers. Some set their body type in 7 pt. on 8 pt. body, some 7½ on 8 or 8½, some 8 on 8½ or 9, and some as large as 9 on 9½ or 10 pt. body. It doesen't take a mastermind to know that it takes a lot more type to fill a column of 7 pt. on a 8 pt. body than it does a 9 pt. face on a 10 pt. body.

Some newspapers confine their news body type face to just one size other than agate and one other larger size for leads and editorials. This is why I like a news machine that holds only two magazines. Other papers try to use every type size made and have their news machines loaded with magazines. This means time lost in magazine changes and copy moving to more than one machine. It also means more time to assemble stories, more time on the makeup, more equipment and more equipment to maintain. This all costs money.

Costly Composition

Many newspapers use a comparatively simple style in setting news while others go to the extreme, filling their news stories with indented paragraphs, initial letters, bold face paragraphs, and all types of eccentric make-up. The difference in this makeup has a bearing on cost.

The newspaper's news policy is important in composing room cost. Some newspapers have a policy whereby it is possible to make up early pages and make them good for the day. Other newspapers operate entirely on a current news policy forcing the composing room to make up all pages on the current shift, making any advance work impossible. Some newspapers make an effort to make good many pages on earlier editions and restrict the makeovers to just a few pages. Other newspapers will open up nearly every page regardless of how small the news content of the page might be.

The number of editions and the number of makeovers throughout the shift varies on nearly all newspapers. A newspaper with few editions and few makeovers can naturally operate much more economically than a newspaper with many editions and many makeovers. The number of editions naturally controls the makeovers and makeovers increase the kill. Some newspapers have a kill that may reach 100 columns in a shift while others might be down to as low as 10. Yet, these papers might have the same number of pages in their city edition.

(To Be Concluded)

Lee Augustine is Traveling—Lee Augustine, president of the Intl. Printers Supply Salesmen's Guild, was a well traveled representative in 1955. Since his re-election to a second one year term last August he has visited seven Guilds and attended their meetings in Washington, D. C.; Cleveland; San Francisco, Calif.; Los Angeles; Chicago, Detroit and Cincinnati.

Great Lakes Conference Constructive

Highlights of the major discussions and addresses at the Great Lakes Mechanical Conference consisted of a thorough going over by stereotype executives regarding the national advertising color mat (see report elsewhere in this issue); a progress report on the Cutler-Hammer newspaper counting and stacking device; ANPA research reports by Technical Research Director Roy Prince; new fine grain zinc engraving metal reported by Lewis S. Somers, vice president, Imperial Type Metal Co.; magnesium engraving techniques and an address on magnesium engraving experience by Franklin D. Schurz, South Bend (Ind.) *Tribune;* newspaper page costs by Harry Eybers, production manager, Washington (D. C.) *Post* and *Times-Herald;* personnel relationships in the newspaper by Warren G. Wheeler, jr., South Bend (Ind.) *Tribune,* and a review and discussion regarding phototypesetting in newspapers by Earl Godshall, manager, Intertype's Fotosetter Field Div., and ProType for display composition by Herb O'Sullivan who is an applications engineer for Mergenthaler Linotype Co.

About 750 production and mechanical executives and manufacturer and supplier representatives attended the Great Lakes Mechanical Conference, Milwaukee, Wis., Jan. 29, 30 and 31, Hotel Schroeder. A considerable number of pre-conference registrants cancelled because of icy roads and grounded airplanes. The equipment and supplies exhibits were visited freely and often. Manufacturers and suppliers occupied booths. A number of new developments were announced for the first time at the conference. President LeRoy Schulz and the Great Lakes officers, together with Milwaukee local committees were congratulated upon the excellent technical and entertainment program throughout conference days.

Officers and directors elected are as follows: President, Cecil Watkins, production manager, Sidney (O.) *Daily News;* his predecessor, LeRoy Schulz, pressroom superintendent, Milwaukee (Wis.) *Journal,* became a director; Vice Presidents: Robert Nelson, production manager, Detroit *News;* Paul O. Brannon, pressroom superintendent, Cleveland *Press;* John E. Innis, stereotype superintendent, Indianapolis (Ind.) *Star-News,* and Arthur Goetz, composing room superintendent, Milwaukee (Wis.) *Sentinel;* re-elected was Secretary-Treasurer Don M. Clark, stereotype superintendent, Grand Rapids (Mich.) *Press.* The following directors were chosen: Leonard Clemens, stereo-press superintendent, Elkhart (Ind.) *Truth;* Ferd Mier, stereotype superintendent, Detroit *Free Press;* Howard Healy, Ashtabula (O.) *Star-Beacon;* Robert Slover, photoengraving, superintendent, Cleveland *Plain Dealer;* Don Holstein, mailroom superintendent, South Bend (Ind.) *Tribune.*

Bright Progress Reports On Fast Etching Processes

Chairman Earl Currise, engraving superintendent, South Bend (Ind.) *Tribune,* and Co-chairman John Dalton, engraving superintendent, Indianapolis (Ind.) *Star-News,* opened the engraving session of the Great Lakes Mechanical Conference at Milwaukee, Wis., on Tuesday afternoon, Jan. 31.

Franklin D. Schurz, editor and publisher of the South Bend (Ind.) *Tribune,* was the first speaker. His topic was *Fast Etching from the Management Point of View.*

"I believe the Dow-ANPA fast etching process will greatly hasten development of photocomposition, direct printing, and color work. Considerable progress can be made in these three fields if newspaper executives will first install the Dow-ANPA fast etching process, then experiment with process color, photocomposition and, in a short time, direct printing.

"Photocomposition in newspapers has become practical for the first time, because of fast etching. Better process color, etched in a much shorter time, is possible because of the new etching technique, and the wider use of color is more practical because of the Dow-ANPA fast etching process.

"The ANPA laboratory believes that a mechanical magnesium plate lockup on presses would be most satisfactory. When this problem has been solved, large newspapers may find direct printing advantageous for magazine sections, and television and radio guides. Smaller papers may wish to print their newspapers by direct plate printing.

"Some engravers, and possibly some business managers, believe the initial cost of a Master or Chemco etching machine is too high, and they do not think the increased production justifies the high investment. Since we have three machines, the South Bend *Tribune* has a large investment in equipment. However, because of the extra production, our depreciation cost per column inch is 43% lower than it was before we installed the fast etching equipment. Thus, we have another example to prove that frequently higher priced, efficient equipment may be less expensive than cheaper, less efficient machinery.

"Another complaint I have heard," Schurz continued, "is that the magnesium is too expensive. It is quite true that it is more expensive than zinc, but the increased cost is more than offset by the time saved in etching. Our total expense has increased 67%, but our production has increased 149%. Therefore, on a square inch basis our costs have been reduced even though our material costs are higher.

"I have also heard that the higher speed engraving process will throw men out of work. In our plant we have increased the engraving staff since we installed fast etching. I think the future is bright for engravers, but only if they can reduce costs through the use of more efficient equipment.

"At the *Tribune,* for example, we would not have experimented with photocomposition had we been forced to etch the plates by the older method. Nor would we have printed as many processed color plates. Because the cost per column inch has been reduced, we have put more work in the engraving department, which has reduced the cost even more.

"There is another factor which is hard to measure in dollars and cents but which is important in newspaper work. That is the saving in time. Etching time for an 18 in. by 24 in. flat of 75 line halftones on magnesium is 1¼ to 1½ min. The etching time for an 18 in. by 24 in. combination flat of magnesium is 16 to 17 min. This will give a depth of 0.004 in. to 0.005 in. in the highs and 0.040 in. to 0.045 in the open area. The time is divided between the combination bath which takes about 9 min. to etch the open areas to 0.018 in.

(*Continued on Page* 109)

One of the few brother teams in the mechanical end of the newspaper business and certainly the only brother team at the Great Lakes Mechanical Conference in Milwaukee, Wis., Jan. 29 to 31 were Earl and Vince Currise. Earl is the engraving superintendent of the South Bend (Ind.) *Tribune,* and Vince works for the Winnebago Newspapers, Rockford, Ill. Earl Currise was chairman of the engraving session at the conference, one of the best sessions of the meeting.

Uses of Electronics In Graphic Arts Industry

By FRANCIS A. WESTBROOK

PART II.—

PHOTOELECTRIC SIDE REGISTER CONTROL

Photoelectric side register control systems, made by General Electric Co., are helpful in the Graphic Arts field to reduce waste and improve quality by controlling side-to-side web motion during printing, trimming, slitting or rewinding operations. For this work the static type of scanner may be used for moderate speed work. It produces a continuous signal voltage relating to the position of the web. This is in comparison to the dynamic type of side register control web scanner which produces pulse signals by "observing" the path of evenly spaced register marks, as previously explained.

For side register control the static type of scanner "observes" the edge of the web or a previously printed line, and when the web moves out of register it passes a signal to the control panel which is amplified and actuates a correction motor. The latter re-positions the web to a point where the scanner receives the correct amount of light, which means that the web is again in register, and the re-positioning motor stops.

This system can be used for a variety of printed materials such as Cellophane, Pliofilm, paper, textiles, plastics, glassine, metal foils and so forth. It is also easy to maintain as there are few moving parts and the equipment is designed for quick inspection and maximum access.

Two side register photoelectric control systems are made by General Electric. The one just described, which uses the static type of scanner, is known as the "two point" system and is designed for applications where the rate of web side travel is moderate. How it works is shown in Fig. 6.

The other, known as the "proportional" system, is designed for an accuracy of 0.001 in. and to handle web speeds which cause run-out rates up to 50 in. per min. This system is also versatile and can be used for the same variety of materials as the "two point" system. Both are supplied in completely packaged form, ready for installation as a unit.

(Continued on Page 85)

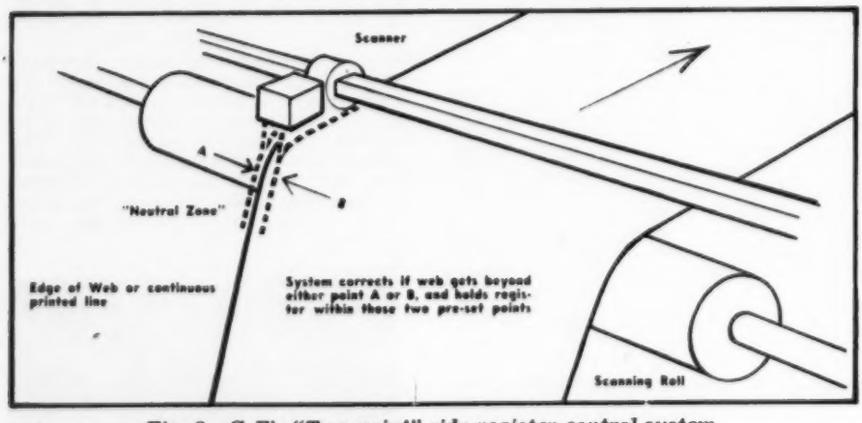

Scanner
A
B
"Neutral Zone"
Edge of Web or continuous printed line
System corrects if web gets beyond either point A or B, and holds register within these two pre-set points
Scanning Roll

Fig. 6—G-E's "Two-point" side register control system.

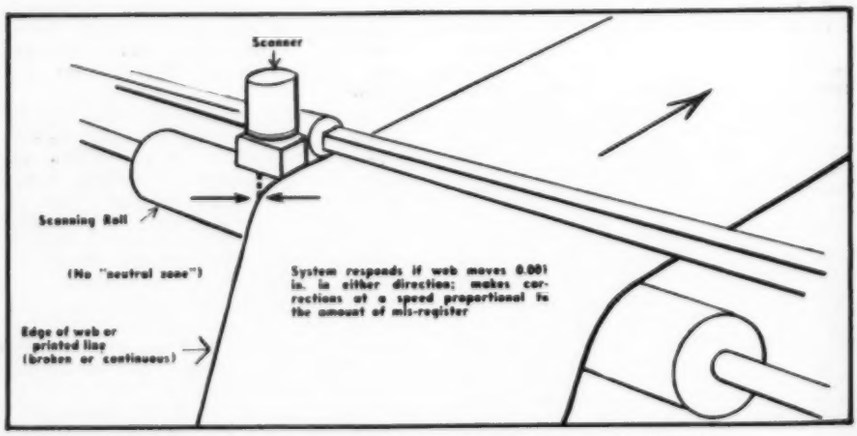

Scanner
Scanning Roll
(No "neutral zone")
Edge of web or printed line (broken or continuous)
System responds if web moves 0.001 in. in either direction; makes corrections at a speed proportional to the amount of mis-register

Fig. 7.—G-E's "Proportional" side register control system.

PRINTING EQUIPMENT Engineer
Presents illustrated descriptions of
23 PLANTS
(New, Projected and/or Modernized)

This presentation is comprised of commercial, publication, newspaper, combination process and some specialty Graphic Arts plants.

We regret it is not possible to publish in this section all data sent to us. However, descriptions of those held over new plants will be published in early issues of *Printing Equipment Engineer*.

Fey Publishing Co. Wisconsin Rapids, Wis.

One of the most recent assignments undertaken by Minneapolis' Graphic Arts Industry, Inc. was for Fey Publishing Co., Wisconsin Rapids, Wis.

The bulk of company's printing of about $1 million annually is executed for paper mills in the Wisconsin River Valley. Most of this work is done by offset printing process.

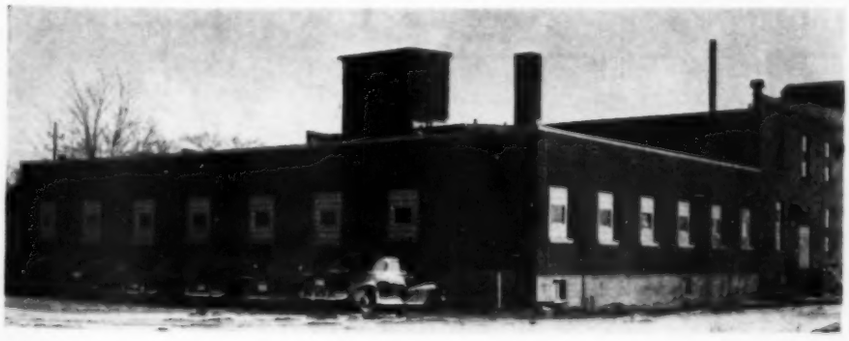
A one-story addition to the existing building has been completed. Total floor space is approx. 70,000 sq. ft. The building is air conditioned.

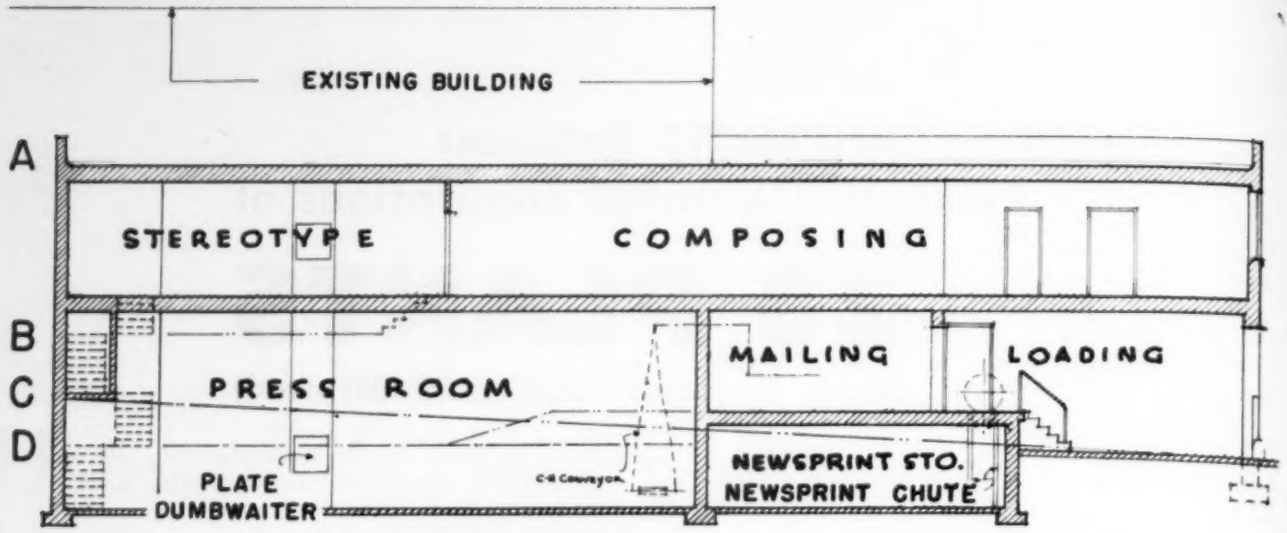
In planning the equipment layout, Graphic Arts Industry, Inc. used miniature three-dimensional models.

Outside facing of the new building addition is brick with concrete foundation. Floors are concrete. Drop continuous row fluorescent fixtures are used throughout the manufacturing part of the plant. Window spaces consist of translucent glass block with inset tiltable window sash for ventilation in mild weather.

View in Composing Room of Recently Remodeled Plant, Fey Publishing Co., Wisconsin Rapids, Wis.

In the composing department, illustrated above, two Intertype linecomposing machines with Monomelt metal melting equipment are used for text composition. There is also a Monotype Material Maker and plenty of type for hand setting for fussy customers. Layout is compact but with plenty of room for movement by the printers.





Cross-section diagram of the Daily *Jeffersonian* showing new and old floor levels

A. Existing 2nd Floor; B. Existing 1st Floor; C. East Alley Grade; D.Existing Basement Floor.

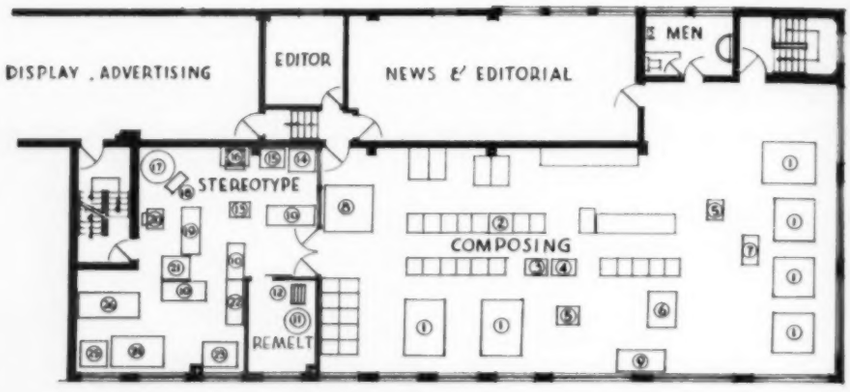
Cambridge (O.) *Daily Jeffersonian*

The plant expansion program of the Cambridge (O.) *Daily Jeffersonian* should lend encouragement to any publisher who feels that he is singularly handicapped as he contemplates expansion of his existing facilities. A visit to that newspaper plant reveals a direct and smooth production operation that was achieved under physical limitations which were a real challenge.

Robert W. Dickerson, Cleveland architect and engineer, made the layout and supervised this difficult job.

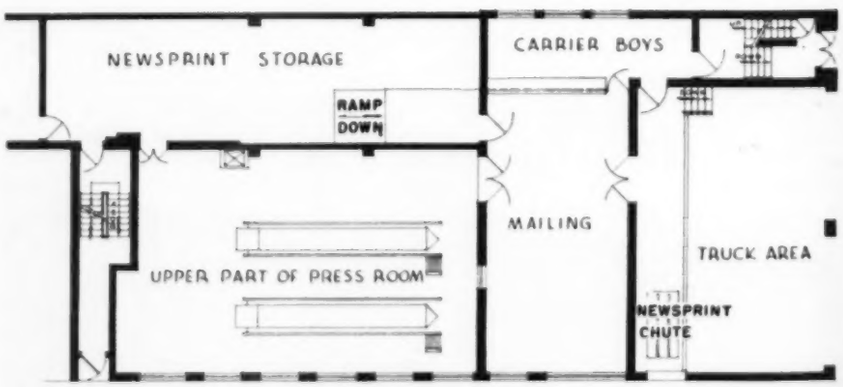
The original *Jeffersonian* site had a width of less than 20 ft. and a depth, from Wheeling Ave. to the alley on the North, of 200 ft. The original building tells a story of growth. The depth of the original two-story building was 58 ft. To this was added another 52 ft., and finally another 45 ft. At this point, since the site slopes 13 ft. from front to rear, the basement emerged from the ground and any further extension to the North would have meant going upstairs instead of downstairs to the basement.

Fortunately, there became available an adjacent parcel of land extending some 29 ft. to the



First Floor Plan

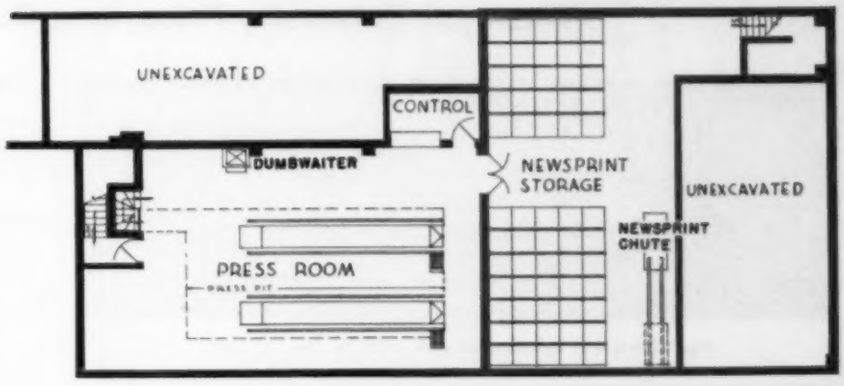
Equipment Key
1. Linecasting Machines
2. Hammond Saw-trimmer
3. Miterer
4. Slug Stripper
5. Saw
6. Ludlow
7. Proof Press
8. Mat Roller
9. Elrod
10. Table
11. Remelt Furnace
12. Pigmold
13. Chip Block
14. Tube Router
15. Scorcher
16. Dumbwaiter
17. Stereotype Furnace
18. Plate Caster
19. Plate Finisher
20. Sta-Hi Former
21. Stereo Saw
22. Flat Scorcher
23. Easy Caster
24. Saw-trimmer
25. Router
26. Flat Shaver



Ground Floor Plan

East and 100 ft. South from the alley which provided a total width of 48 ft. 6 in. on the alley and made possible the layout shown by the accompanying drawings.

Since delivery of newsprint and the dispatching of papers is at the alley end of the plant, the grade of the alley became the starting criteria in planning. As is shown by the section drawing, trucks delivering newsprint and receiving printed papers, back up to a 6 ft. wide dock. The dock floor, which is at the same level as the mailing room, is about 3 ft. above truck pavement. The pressroom floor is 8 ft. below the mailing room level and papers are elevated to the mailing room by a Cutler-Hammer conveyor. The area below the mailing room and the present basement, adjacent to and some 5 ft. above the pressroom floor, provide ample newsprint storage. A steel pipe newsprint slide carries the rolls to the lower storage level and an easy ramp permits rolling them down to the original basement level. A hoist, trolley and section of track convey the newsprint rolls from existing basement to pressroom level. The press installation is two twinned Duplex tubulars.



Basement Plan

At the start of the construction operation the *Jeffersonian* press was located in the area now used by display advertising. It was continued in service until the new presses were installed and placed in operation. There were some problems incidental to getting newsprint into the plant and newspapers out, but not an edition was missed.

The news and editorial offices, the composing room and the stereotype department are on the same floor level above the loading dock, mailing room and pressroom. This floor level is about 3 ft. above the original first floor.

The room over the composing room and stereotype department is designed as a future floor and it coincides with the second floor line of the existing building. In the initial planning stages it was assumed that this future floor would be needed now. Through the juggling and nesting of floor levels suggested by grade conditions, adequate space for present needs and considerable future growth were developed without it, however.

The St. Petersburg Printing Co., St. Petersburg, Fla.

Present quarters of the St. Petersburg Printing Co. contain approx. 25,000 sq ft. of floor space, or double the amount occupied by the firm when it was taken over by Dixie M. Hollins, as president, and Ben Granger, as vice president and general manager, in 1932. Production of telephone books for the Peninsular Telephone System, a major product of the company, was more than one million volumes last year. All floors of the plant are finished in dustless cement; most of the lighting fixtures are fluorescent. Last year the firm installed its second 64 page Goss rotary magazine press. Other new equipment includes a 24 pocket gathering machine and a Sheridan Perfect Binder. The company has installed a small offset press and a larger offset press is contemplated. A new two color Miehle flatbed press has also been bought.

Wesleyan University Press, Inc., Columbus, O.

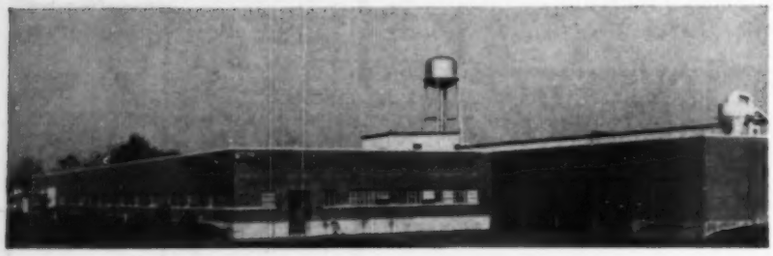


Fig. 1—View of building showing shipping doors at right.

Fig. 2—Pressroom looking toward flatbed presses at right rear.

Fig. 3—Mailroom showing overhead mail sack conveyor at right.

Fig. 4—Close up of mail sack conveyor showing the turn-around at delivery end.

The new plant of The Wesleyan University Press, Inc., on the outskirts of Columbus, Ohio, is unusual because virtually all the operations involved in publishing and printing are conducted in an assembly line process adapted from the methods of heavy industry and under a single roof.

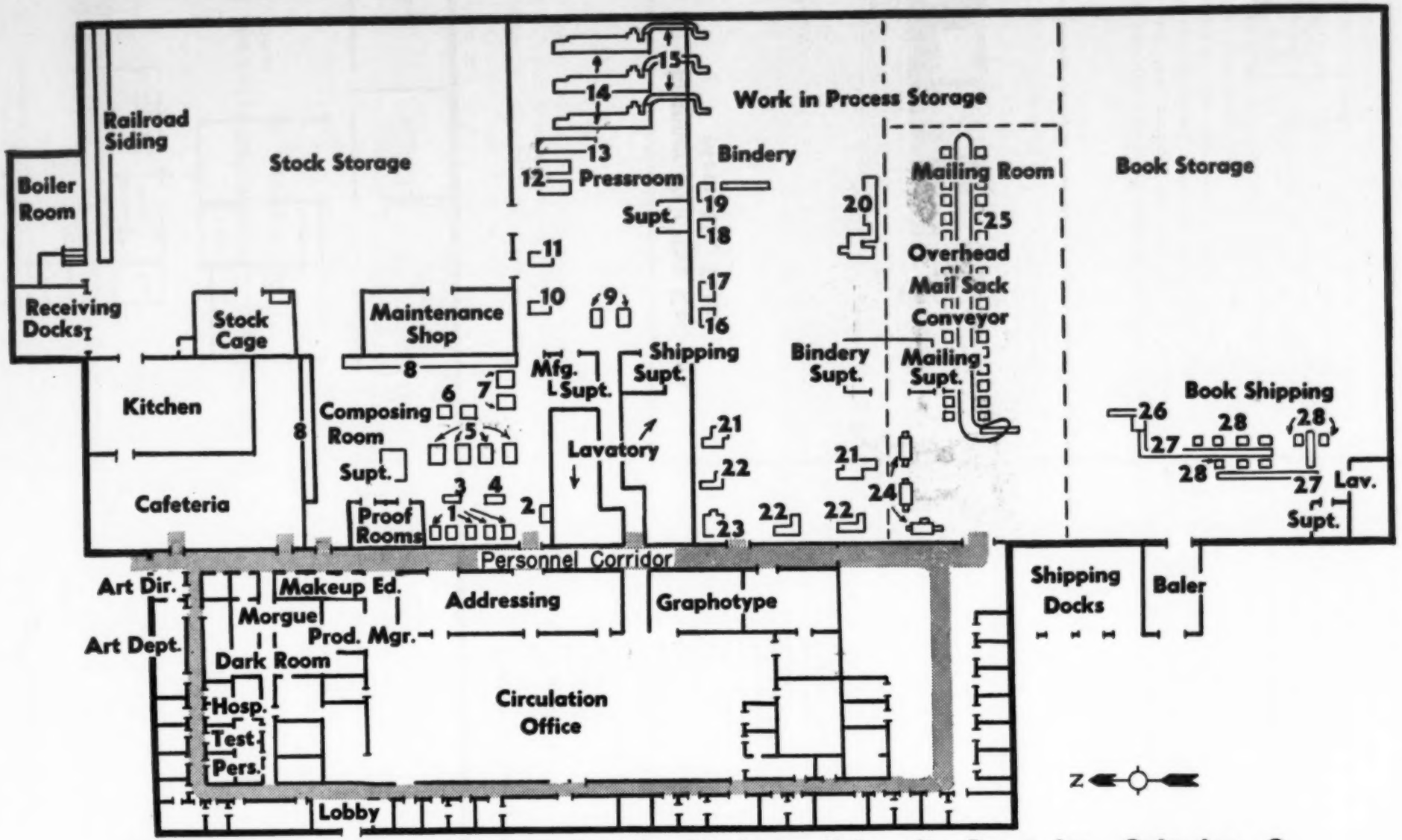
Officials say the plant's layout, with efficient materials handling equipment free to move through large unobstructed floor areas, has permitted a marked increase in overall productivity over that possible in the former quarters. The Wesleyan Press is believed to be one of the first integrated plants in the publishing industry to use straight-line production techniques. There is almost no backtracking from one operation to another, even though the only publishing functions not performed in the plant are actual writing of copy, engraving, and electrotyping.

Designed and built by The Austin Co., the plant publishes and prints 12 weekly periodicals for use in schools, plus textbooks, workbooks, supplementary readers, and other teaching aids—more than 300 publications in all. Millions of copies are shipped annually to all 48 states and to 60 foreign countries. This tremendous volume must be held to tightly coordinated time schedules, moreover, since schools in Los Angeles, for example, must receive copies of any given publication at the same time as schools in eastern cities.

In addition, the plant is headquarters for the largest children's book club in the world. This activity involves handling all subscription matters, as well as printing, assembling and mailing all promotional material. Hence the efficient operation made possible with the new plant is an absolute necessity.

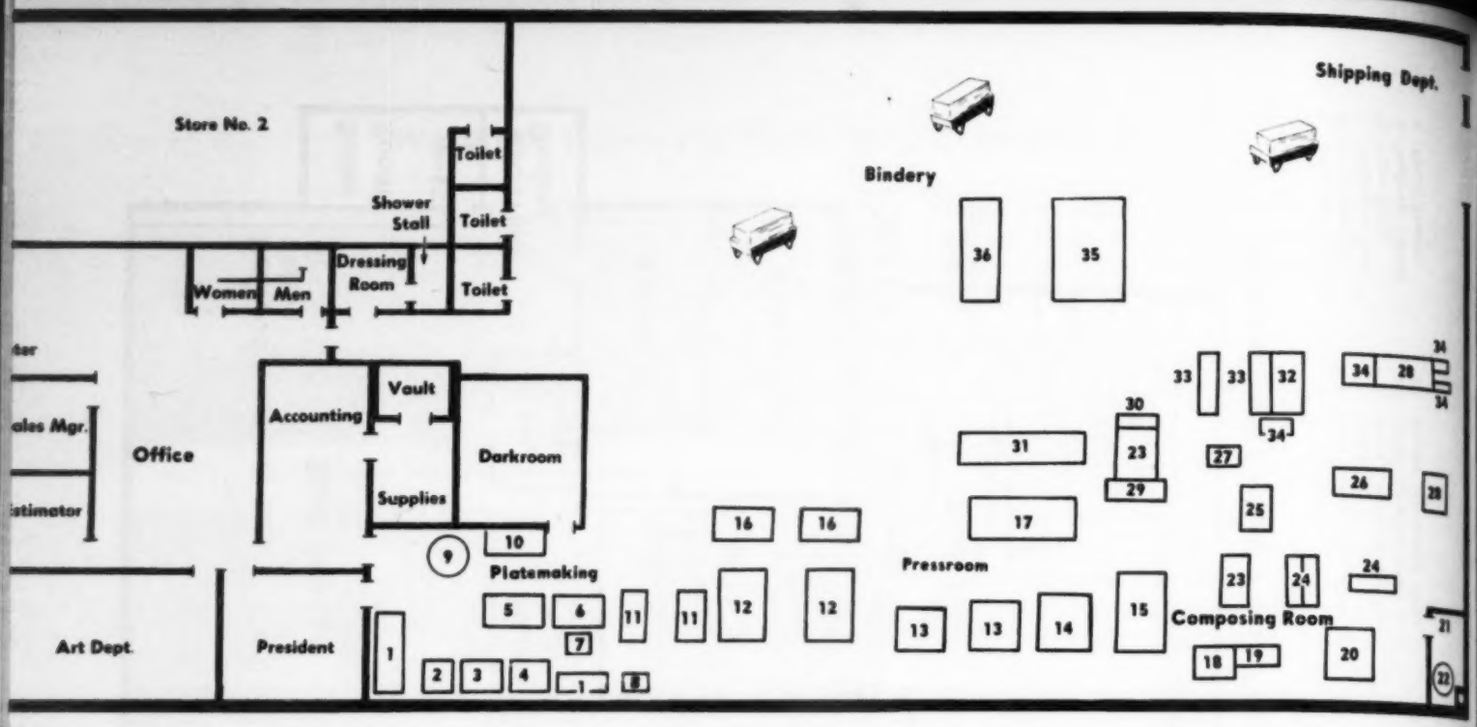
Formerly, most printing facilities of the Wesleyan Press were located in a three-story building in downtown Columbus. Although relatively modern, this building became inadequate as business increased, and there was no adjacent land on which to expand. Experience had proved that too much valuable time and energy was wasted in movement of personnel and materials from one floor to another. Further in-

(Continued on Page 102)



Equipment Key and Floor Plan Layout of The Wesleyan University Press, Inc., Columbus, O.

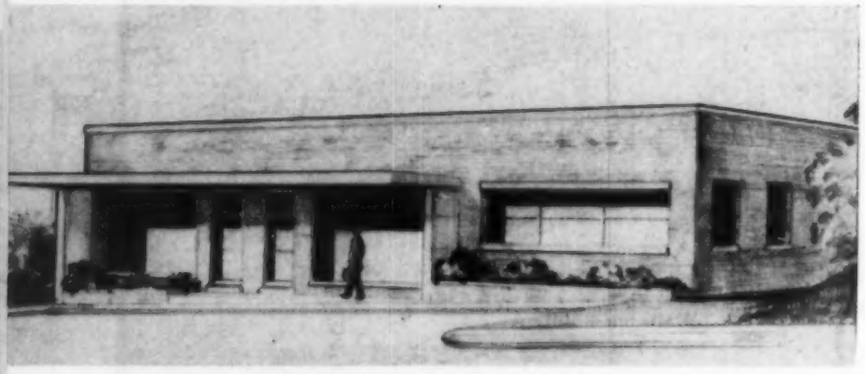
1. Linotype Machines
2. Elrod Machine
3. Magazine Racks
4. Type Dump
5. Makeup Tables
6. Proof Presses
7. Lockup Tables
8. Plate and Type Storage Racks
9. Miehle Vertical Presses
10. Miller Simplex Press
11. Miehle Horizontal Press
12. Miehle 41 Presses
13. Miehle Two Color Press
14. Goss 32 Page Rotary Magazine Presses
15. Overhead Newspaper Conveyors
16. Seybold 45 in. Cutter
17. Seybold 50 in. Auto-Spacer Cutter
18. Seybold Three-Way Trimmer
19. Christiansen Book Gatherer-Stitcher
20. Sheridan Book Gatherer-Stitcher-Trimmer
21. Cleveland 00 Folders
22. Cleveland W Folders
23. Dexter Folder
24. Anderson Single Wrapping Machines
25. Newspaper Wrapping Tables
26. Bostitch Automatic Top and Bottom Carton Stapling Machine
27. Roller Conveyors
28. Packing Tables



Equipment Layout of Brunner Printing:

1. Table
2. Line Up and Register Table
3. Stripping Table
4. Negative Table
5. Plate Development Table
6. Vacuum Printing Frame
7. Nu-Arc Lamp
8. Jogger
9. Whirler
10. Sink
11. Offset Presses
12. Harris Offset Presses
13. Platen Presses
14. Heidelberg Press
15. Kluge Press
16. Paper Tables
17. ATF-Kelley Press
18. Ludlow Machine
19. Ludlow Matrix Cabinet
20. Linotype Machine
21. Metal Remelting Room
22. Metal Remelting Furnace
23. Imposing Tables
24. Racks
25. Saw-Trimmer
26. Vandercook Proof Press
27. Proof Press
28. Tables
29. Chase Rack
30. Dead Rack
31. Stock Table
32. Worktop-Cabinet
33. Type Cabinet
34. Cut Cabinet
35. Paper Cutter
36. Folding Machine

Brunner Printing Co., Inc. Memphis, Tenn.



ketch of new Brunner Printing Co. plant. Modern facade is matched by good layout inside.

The new plant of the Brunner Printing Co. is one of a very few, perhaps the only one, in Memphis specifically planned, designed and built for printing operations. The firm specializes in creating and printing letterheads on a national basis. The company employs three artists full time to create letterheads, with local printers all over the country taking the orders and Brunner Printing Co. executing the design and printing the order. The front of the building is of modernistic design and is constructed of Roman Brick. Plumbing and heating was installed in such places as to allow for addition of new printing machinery or for moving machinery without altering the plumbing or wiring systems. The wiring was installed in the floor with outlets spotted conveniently throughout the plant. This is the first Drive-In printing plant in Memphis with parking space for customers provided right in front of the plant. Space for delivery trucks and employee parking is provided in the rear of the plant. Key employees helped plan the building along the Francis J. Brunner, president of the firm. Plans for the building were submitted to and approved by the largest manufacturers of printing equipment in the country before specific planning and designing was started by the architect, James H. Herrell. The key employees who participated in the planning included William Waggoner, plant superintendent; Robert Wood, offset department foreman; and O. C. Smith, composing room foreman. The firm today has more than 25 regular employees.

Norfolk (Va.) Newspapers, Inc.

First phase of a $2 million expansion in the production facilities of the Norfolk (Va.) *Virginia-Pilot* and *Ledger-Star* will be planned and engineered by Chas. T. Main, Inc., Boston, Mass. These newspapers are published by Norfolk Newspapers, Inc. This initial phase, which will cost approx. $1 million, will include adding a 50 ft by 130 ft., four-story extension to the rear of the present buildings.

What It Will Mean

The expansion calls for a new mailing room and loading dock, adoption of the Dow etching process in the engraving department, a substantially enlarged composing room, relocation and consolidation of the stereotype department, major additions to and relocation of press facilities, and storage room in the extension for from seven to ten days' supply of newsprint. Flooring in the composing room area will be Johns-Manville Industrial Tile. All lighting will be fluorescent; the building will be air conditioned. This first phase of the $2 million expansion program is designed to relieve pressure on the mechanical mailing and press departments of the newspapers brought about by large gains in circulation. At the end of 1937, the *Virginia-Pilot* had 43,247 daily subscribers and 43,336 subscribers on Sunday, while the *Ledger-Post* had a circulation of 41,575. As of Nov. 7, 1955, comparable figures read 107,340 daily and 140,705 Sunday subscribers for the *Virginian-Pilot* and 93,623 for the *Ledger-Star*.

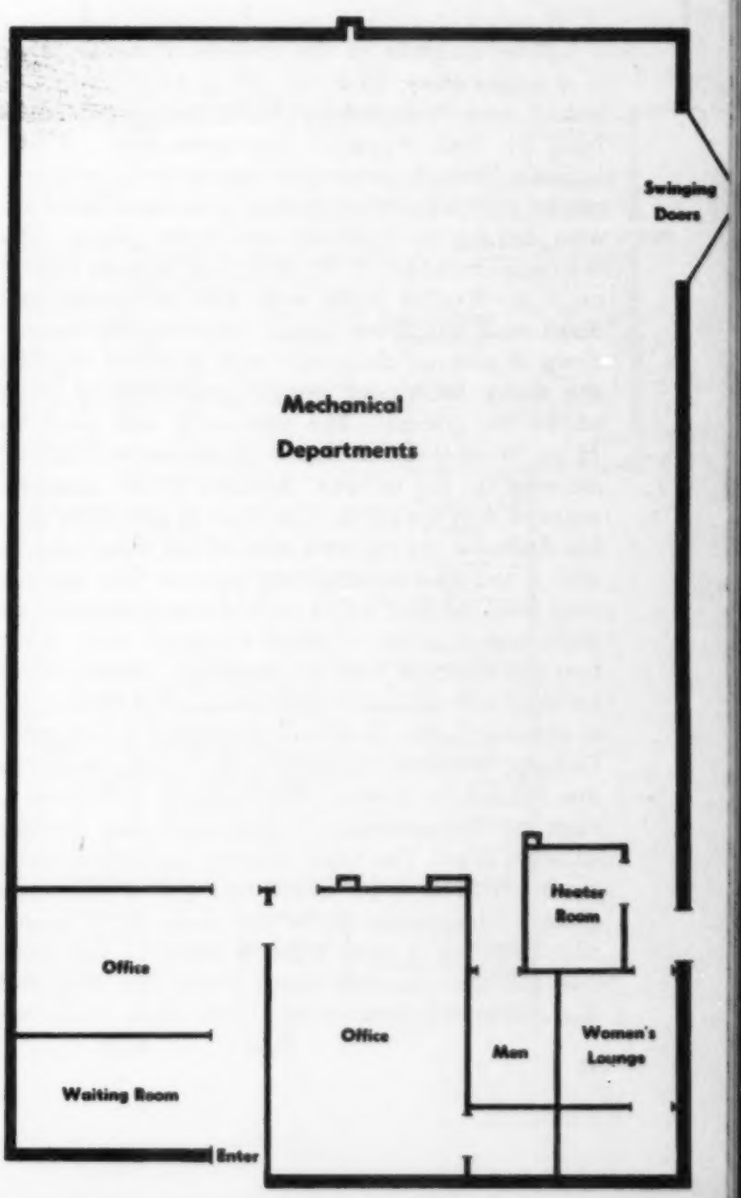
For Comfort and Safety

Another feature of the addition will be a lunch room for employees in the mechanical departments. This will be located on one of two mezzanines in the new building. A first-aid room is planned. Wash rooms and locker rooms will be enlarged so as to better accommodate the growing work force in the mechanical departments. No starting date has been set for the second phase of the expansion. However, when it is undertaken it will include further major equipment additions to the pressroom and will involve approx. $1 million.

New addition to Norfolk Newspapers plant is in the right foreground.

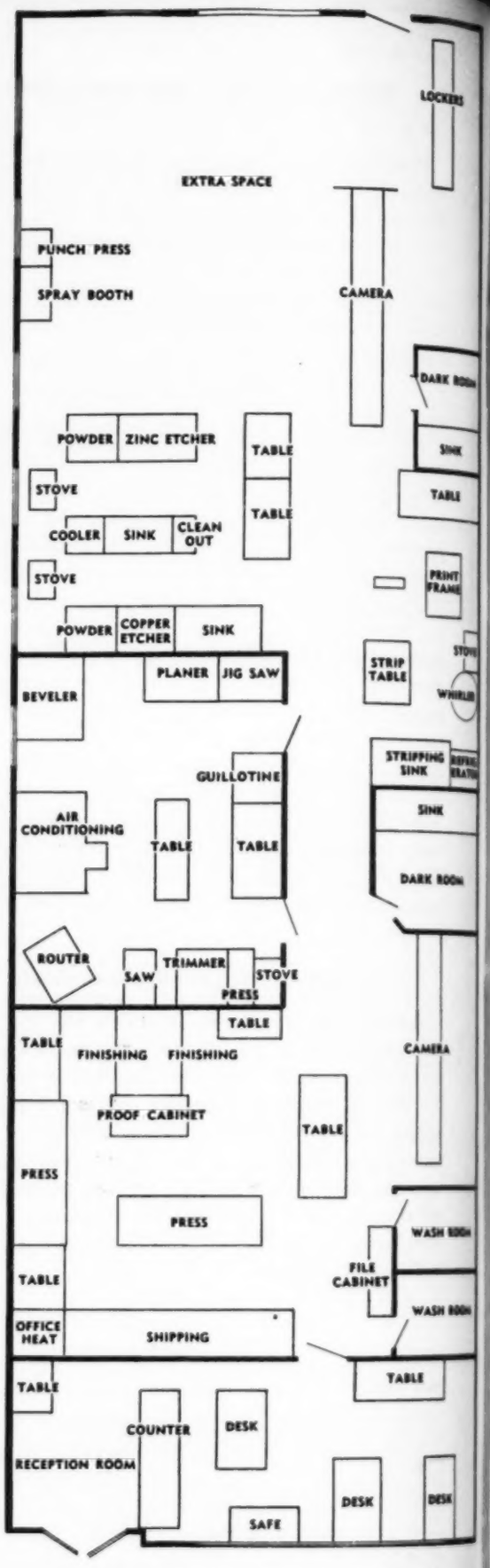
Springfield Commercial Printing, Inc. Springfield, O.

This new plant made more than 2700 sq. ft. of floor spac available to Springfield Commercial Printing, Inc., at a co of approx. $32 thousand. The firm specializes in business an advertising printing, both letterpress and offset. With almo entirely new equipment now, future plans call for the additio of more offset equipment, says Gordon Rosenberry, compan president. Contractor for the new building was Six Industrie Inc., Springfield, O. Front of the building is finished in Roma brick and glass. The plant is lighted with fluorescent lightin Built on a concrete slab, the building is heated by a perimete system. Office floors are finished with asphalt tile.



LaSalle Photo-Engraving Corp. South Bend, Ind.

New quarters of the LaSalle Photo-Engraving Corp. is a single story, 33 ft. by 100 ft. building in South Bend, Ind. It was designed by W. W. Schneider, architect, and built by Paul Woodcox, contractor, both of South Bend. LaSalle Photo-Engraving is primarily a producer of high grade photoengraving plates, also some steel and aluminum etching for indicator and name plates. The front of the new building is of dark red Roman Brick faced on an 8 in. Waylite block wall with aluminum canopy windows and aluminum doors. The canopy above the windows is also of aluminum with stainless steel lettering of the firm's letterhead design and lettering on the brick above the canopy. The side walls and back end are of 12 in. Waylite block with a blown-on waterproof concrete material on the outside. Interiors of the outside walls are painted Waylite block. The floor in the office area is Vinylite Asbestos on concrete and all the shop area is concrete with a red colored hardened surface. The flat built-up roof over steel decking on 14 in. bar joist supported by the side walls has no posts or center supports. Heat is supplied by two gas furnaces through perimeter heating ducts installed for dual use with air conditioning. The ceiling in the office is acoustical tile. In the shop area it is acoustical plaster. Etching, machine, finishing and proving department areas are lighted by louvred flourescent 8 ft. fixtures located in rows on the ceiling, furnishing 110 foot candles of light at work level. The wall between the office and shop is a combination of 4 in. black and yellow corrugated Fibreglass. Other inside walls are made of ¼ in. fir plywood with three large glass window areas in the machine room. The mechanical department walls are insulated to subdue machine noises.



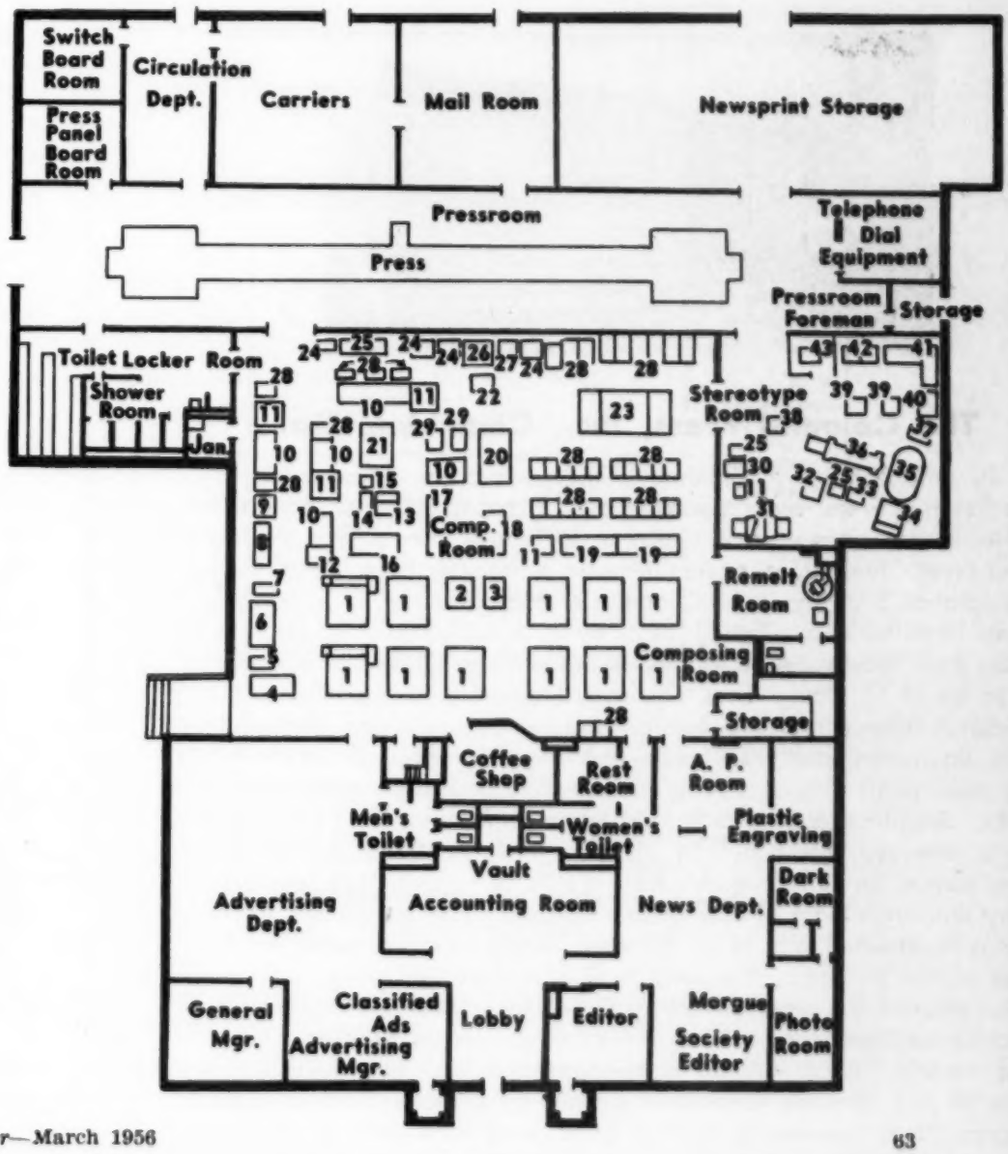
Floor plan of the LaSalle Photo-Engraving Corp. Customer parking and loading dock is at rear.

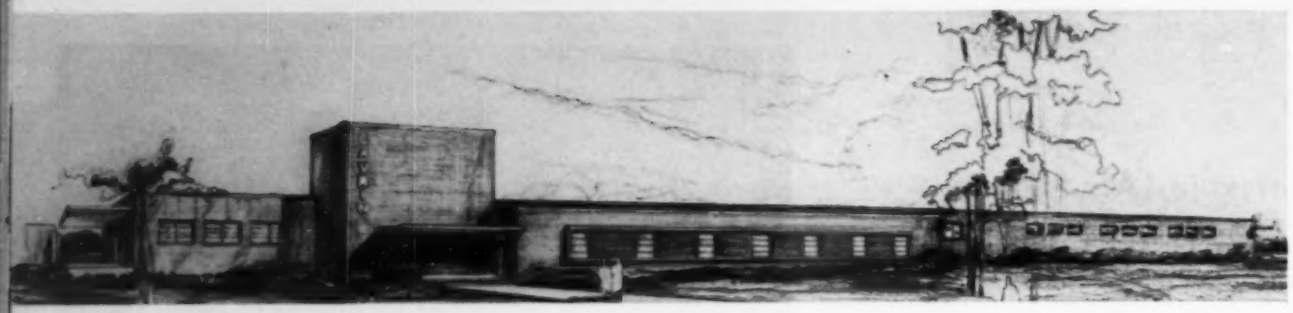
Huntsville (Ala.) *Times*

The new building and equipment of the Huntsville (Ala.) *Times* represent an investment of more than $500 thousand. Designed by Warren-Knight & Davis of Birmingham, Ala., the brick and concrete block building provides approx. 16,000 sq. ft. of floor space. It is completely air conditioned. The building was constructed by Brice Building Co., Birmingham, Ala., on a 3.2 A. site adjacent to the Nashville, Chattanooga & St. Louis Railroad right of way and the new Memorial Parkway which bisects the Huntsville area. Equipment installed in the new building includes a six-unit Goss Universal Press. T. A. Winston is the mechanical superintendent of the Huntsville *Times*. Circulation of the paper has increased from 2862 paid subscriptions in 1931 to 20,000 subscriptions in 1955.

Equipment Legend

1.—Linotype Machines
2.—Desk Ad Copy
3.—Desk News Copy
4.—Machine Parts
5.—Drill Press
6.—Machinist's Bench
7.—Plunger Cleaner
8.—Elrod
9.—Strip Storage
10.—Ad Makeup
11.—Saw
12.—Reid Magazine Rack
13.—Ludlow Cabinet
14.—Vertical Miterer
15.—Slug Stripper
16.—Ad Dump
17.—News Dump
18.—News Proof Press
19.—Page Makeup Table
20.—Page Proof Press
21.—Ludlow Caster
22.—Slug Surfacer
23.—Mat Roller
24.—Type Cabinet
25.—Table
26.—Page Storage Rack
27.—Mat Cabinet
28.—Trucks
29.—Proof Readers' Desks
30.—Router
31.—Shaver
32.—Stereo Saw
33.—Flat Scorcher
34.—Flat Casting Box
35.—Metal Furnace
36.—Autoplate
37.—Pump
38.—Chipping Block
39.—Scorcher
40.—Dry Mat Former
41.—Packing Table
42.—Mat Shears
43.—Curved Router





Arthur J. Gavrin Press, Inc., Denison, Tex., Plant

The new plant of the Denison, Tex., branch of Arthur J. Gavrin Press, Inc., contains approx. 34,500 sq. ft. in the production departments and approx. 3000 sq. ft. of office space. The building is completely air conditioned both summer and winter. Walls are of 12 in. masonry construction—8 in. of tile and 4 in. of brick. Floors in the office are finished in asphalt tile; in the main plant they are concrete. Architect for the plant was Temple Phinney, Dallas, Tex.; contractor was Don Elliott Associates, Sherman, Tex. Arthur J. Gavrin, president and founder of the firm, credits specialization in the business forms field for much of the growth of the company to its present need for a Texas branch plant. Gavrin produces individual sets and continuous forms under the trade name of Snap-Easy. Production personnel of the Denison, Tex., plant includes Abraham Waroff, plant manager; Louis Emerson, pressroom foreman; James Emerson, collator department foreman; Roy Salmon, night collator foreman; and Roy Daniels, composing room foreman.

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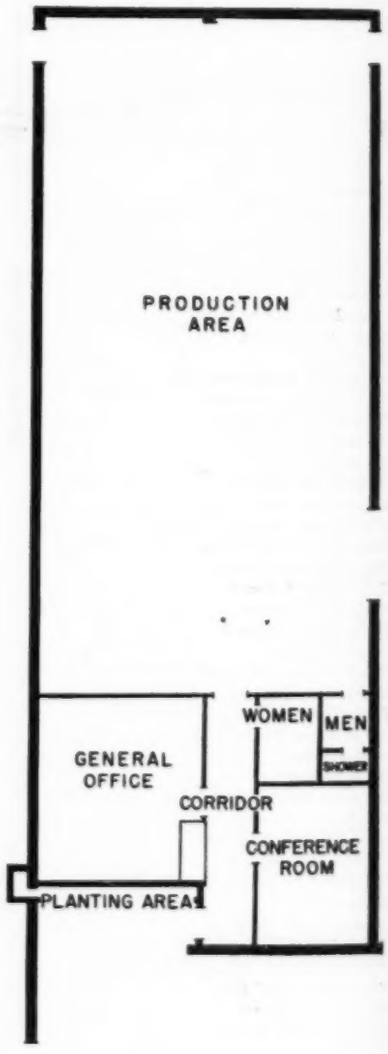
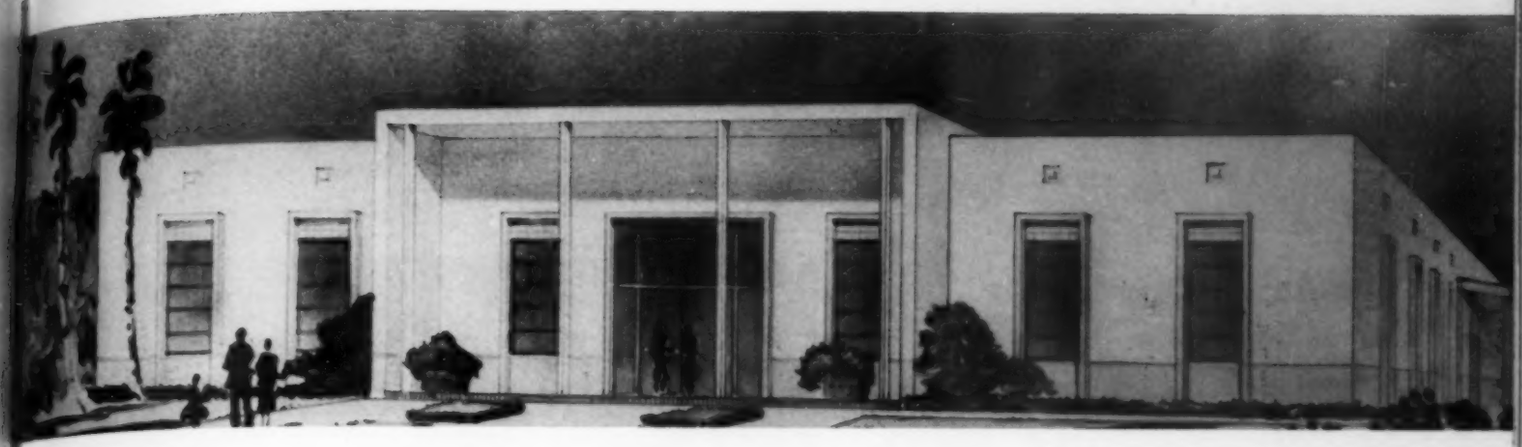
The Colonial Press, Inc., Chamblee, Ga.

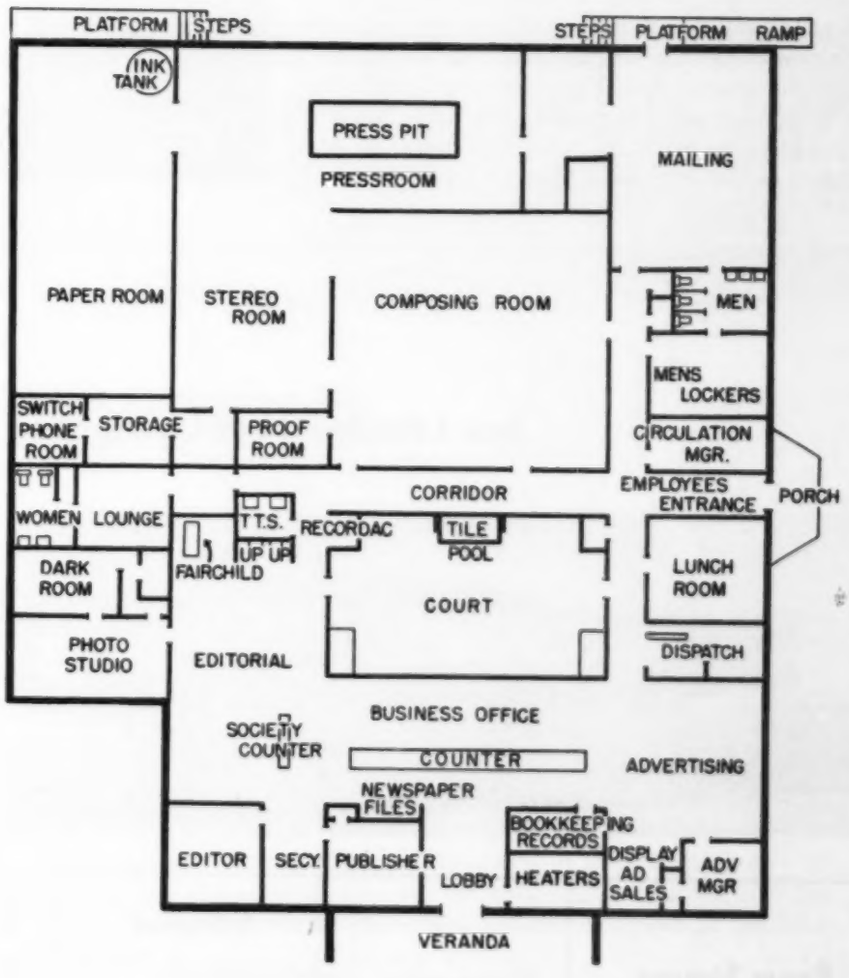
Its new 2400 sq. ft. building is the pride of the management at The Colonial Press, Inc., Chamblee, Ga. Colonial President Robert D. Carlen began printing as a hobby in 1951 on a 5 in. by 8 in. Kelsey hand press. Present equipment includes a 10 in. by 15 in. Heidleberg auto platen; 8 in. by 12 in. Chandler & Price; 7 in. by 22 in. Kelly B press; 19 in. by 24 in. Cottrell; 14 in. by 20 in. Multilith; 11 in. by 17 in. Miller Auto Master Speed Platen; 19 in. by 28 in. Cleveland B Folder; 20 in. by 26 in. Dexter Book Folder; a Monotype combination caster; a Scan-A-Graver; and complete art and layout equipment, composing room equipment and offset plate and negative handling equipment. The small plant without interior support columns offers maximum flexibility. Architects were Mastin and Summer, Atlanta, Ga. The building is provided with 8 ft. 6 in. ceilings. Piles to strengthen the floor were placed on 10 ft. centers under a 5 in. re-enforced concrete floor. Gray Brickcrete Black Mortar joints were used. Five ply tar and gravel roof is constructed with 12 in. WF steel beams 15 in. on center lengthwise of the building. The front wall is stacked Brickcrete with redwood strips in the recessed front wall. Building contains 175,000 b.t.u. duct heater sized for 11 T. air conditioning unit for draftless heating and cooling. Shop lighting is accomplished with two rows of two tube 96 in. Slimline fluorescent fixtures where necessary providing approx. 75 ft. candles of light at work level with spot lights at inspection and press points. The plant does commercial and multi color (no process) work and prints the weekly, North DeKalb *Record* and Norcross *News*.



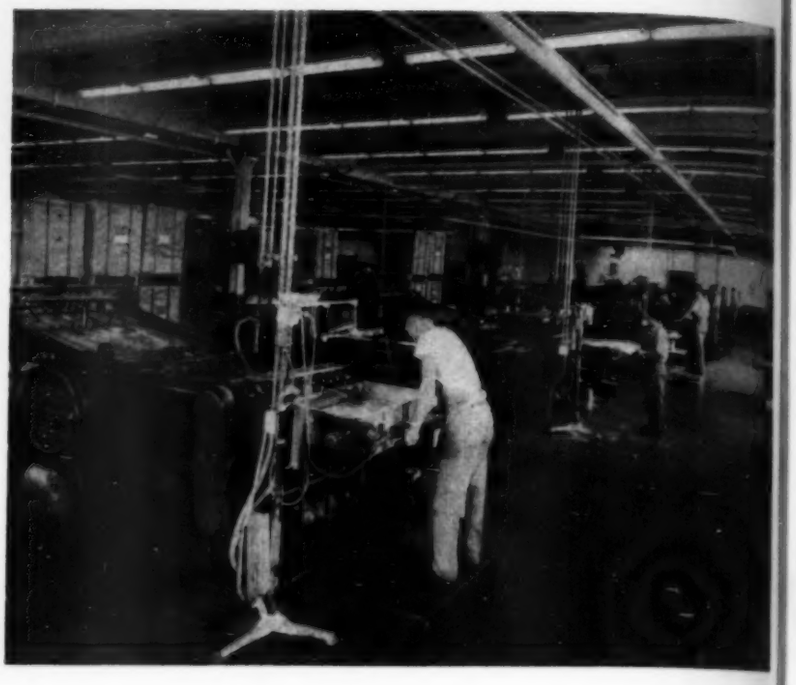


The Redlands (Calif.) *Daily Facts*

As part of a $250 thousand expansion program, a 14 thousand sq. ft. building is under construction for the Redlands (Calif.) *Daily Facts*. An unusual feature of the building is an open interior courtyard with glass on three sides. This is for use of customers and employees. "We believe our place of work should be pleasant and attractive as well as functionally efficient," says William G. Moore, publisher. The building is of concrete block construction with asphalt tile floors in offices and concrete treated with a surface hardener in the mechanical departments. Aluminum awning type windows are used. Flush lighting panels are used in the business office and surface-mounted fluorescent fixtures elsewhere. The building is heated by four gas burning forced air units. Warm air is carried through perimeter run under slab ducts and enters rooms through baseboard registers. There is a parking lot for 40 cars. When the *Daily Facts* moves into its new building, it will change from flatbed to rotary press equipment. A 32-page Hoe semi-cylindrical press is being installed with a speed of approx. 40 thousand copies per hour. Stereotype equipment includes Goss Roll-O-Mat, a Wood Pony Autoplate, a Ludwick pot, and a Sta-Hi former and router. Architect for the building was Benjamin J. Rabe, of Redlands, Calif. The building was planned for an addition if needed.



Democrat Printing Co., Madison, Wis.



The new plant of the Democrat Printing Co. is a single story, concrete block and brick building. It contains approx. 80,000 sq. ft. of floor space. Originally printing the Madison (Wis.) *Democrat*, a newspaper, the firm now does contract and publication printing and general printing in letterpress and offset. Note the interior view of the plant at right. The skids of paper are stacked two high at the delivery end of the presses. Fluorescent lighting is used throughout the plant. Electrical, water and other connections run overhead in exposed position near the trussed roof. Plant personnel includes Arthur Connaughton, superintendent, and Department Foremen Lyle H. Newcombe, Theodore M. Olson, Archie Hadden, and Wally Ottum.

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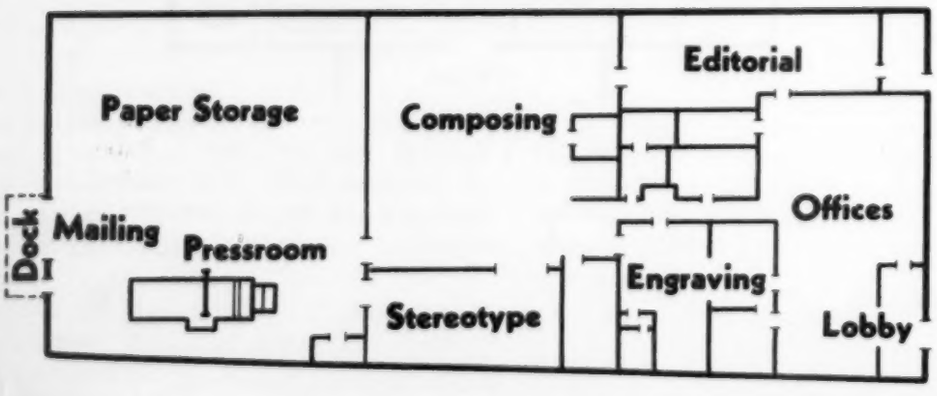
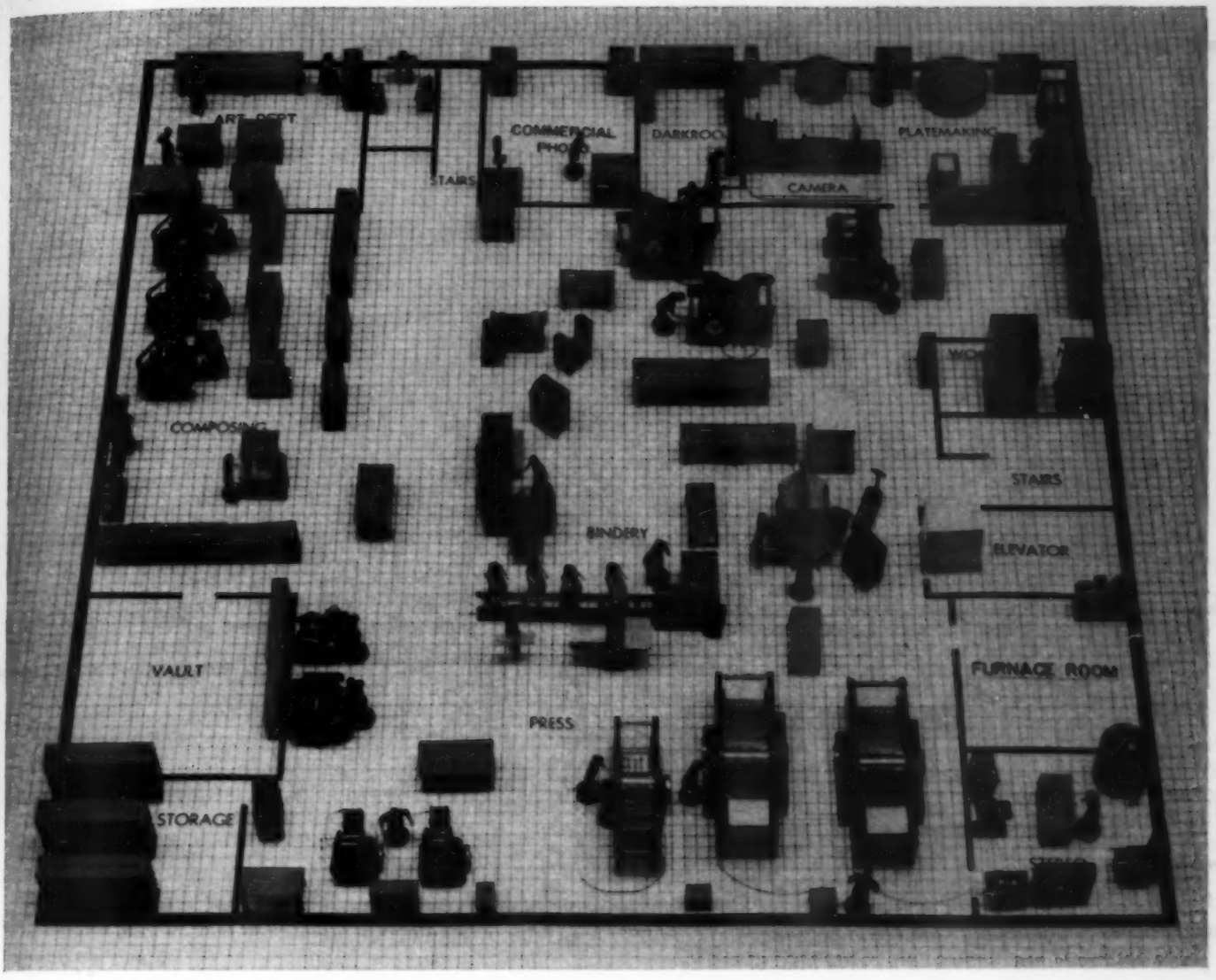
San Leandro (Calif.) Morning News



A modern one-story building of concrete tilt-up construction (at left) which provides 13,600 sq. ft. of floor space is the new home of the San Leandro (Calif.) *Morning News*. Completion of the plant last fall resulted from a four year period of growth and expansion during which time the *News* had to nearly triple its facilities to keep up with publishing and printing requirements. The building has been constructed with cement floors in the mechanical departments and asphalt tile floors in the editorial and business offices. There is fluorescent lighting throughout. The heating system has been designed so as to permit a flow of fresh air through the building during the warm season or at any other time. The building has also been designed to provide for future expansion needs. Another feature is an off-street parking space with accommodations for 65 customer and employee cars.



Conrad Publishing Co.
Bismarck, N. D.

Shown above is a commercial printing plant equipment layout. This layout, made with the use of three-dimensional models with lines ruled on base to ¼ in. per ft., was prepared by Paul J. Ocken, general manager, Graphic Arts Industry, Inc., Minneapolis, Minn., for Conrad Publishing Co., Bismarck, N. D. This is Conrad's combination letterpress and offset commercial printing department.

At the upper part of the picture can be identified the art department, photographic studio and offset platemaking rooms The two offset presses are positioned next to the studio and platemaking rooms out in the center open area. At center-left is the composing room. In lower-center part of the layout are located the seven letterpresses. The stereotype room is at lower right.

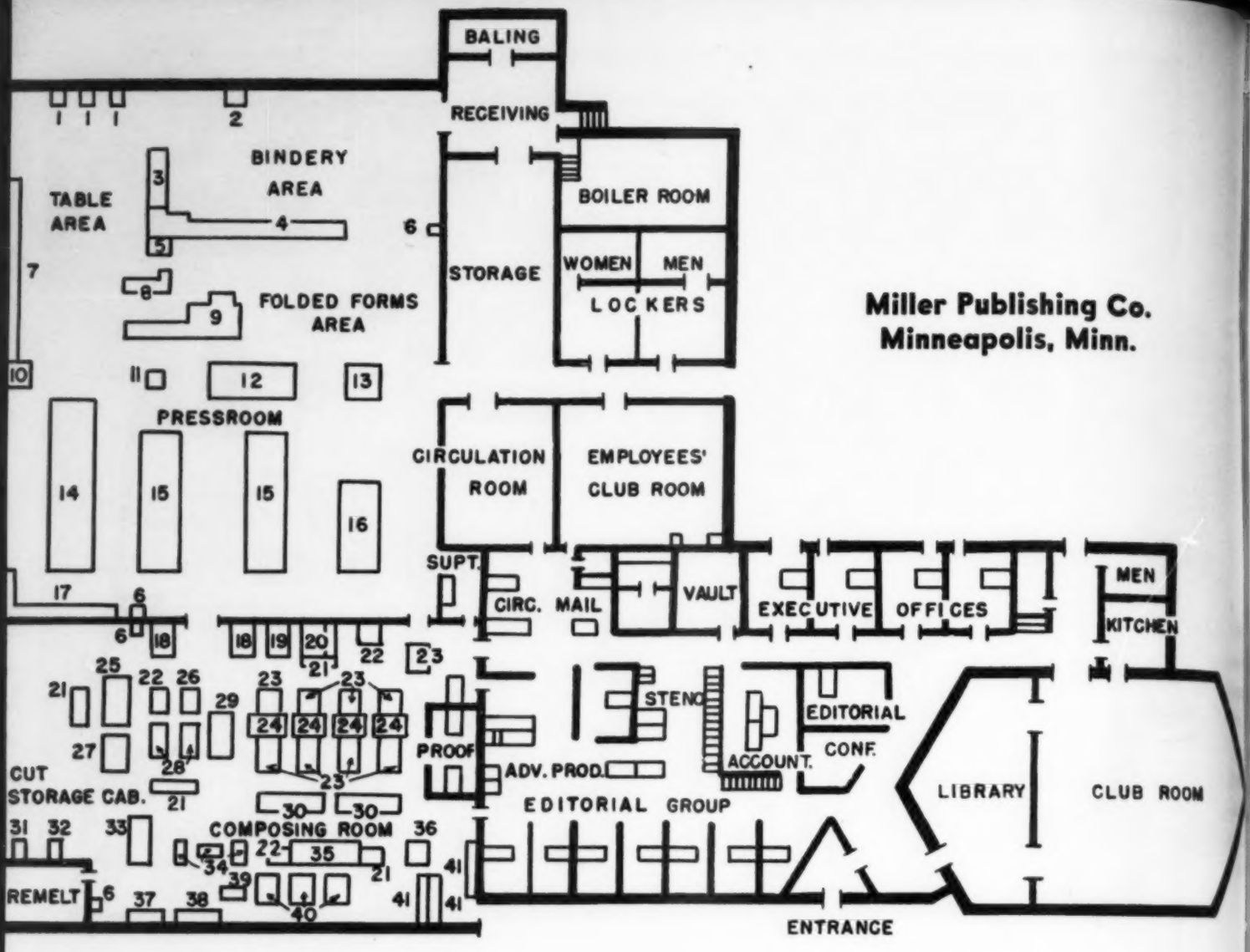
Note that in this layout the bindery is positioned between offset and letterpresses into which printed work flows with minimum travel. Finished work is transported by hand truck to the elevator immediately to the right.

The Conrad Pub. Co. does approx. $700 thousand business annually. Its printing is divided into four classifications: (1) A weekly, tri-weekly and shopping papers; (2) Publication printing; (3) Commercial letterpress, and (4) Offset commercial printing. Floor space in the plant is 40,000 sq. ft.

Each of the three sons of E. J. Conrad, the firm's founder, is in charge of a department.

Bismarck is in the heart of Western Dakota's oil boom country and probably is the fastest growing letterpress and offset printing business in the Midwest.

Ocken relates that some time ago he executed a revised plant layout for Conrad. By the time the layout was the means for producing efficiently, it became necessary to revise the equipment layout to accommodate expanding volume of business.



Equipment Key for the Miller Publishing Co. Plant

Bindery Area

1. Hand Stitcher.
2. Tying Machine
3. McCain Trimmer
4. Christensen Gary 8 Station Stitcher
5. Packer
6. Sink
7. Roller Storage
8. Cleveland Folder, 19 in. by 25 in.
9. Baum Folder, 30 in. by 48 in.
10. Markout Booth

Pressroom

11. 10 in. by 15 in. Press
12. No. 2 Kelley
13. Cutter
14. Two color 46 in. Miehle Press
15. Single Color 29½ in. Miehle with Pile Feeder
16. Single Color 49½ in. Miehle Press
17. Ink Storage

Composing Room

18. Chase Racks
19. Ad Storage
20. Galley Cabinets
21. Proof Press
22. Saw
23. Imposing Table
24. Material
25. Storage
26. Power Miterer
27. Ad Desk
28. Makeup Tables
29. Type Cabinets
30. News and Ad Storage
31. Router
32. Band Saw
33. Ad Storage
34. Ludlow Matrix Cabinet
35. Correction Bank and Table
36. Copy Desk
37. Elrod Caster
38. Machinist's Bench
39. Reid Magazine Rack
40. Intertype Model C
41. Cut Cabinets

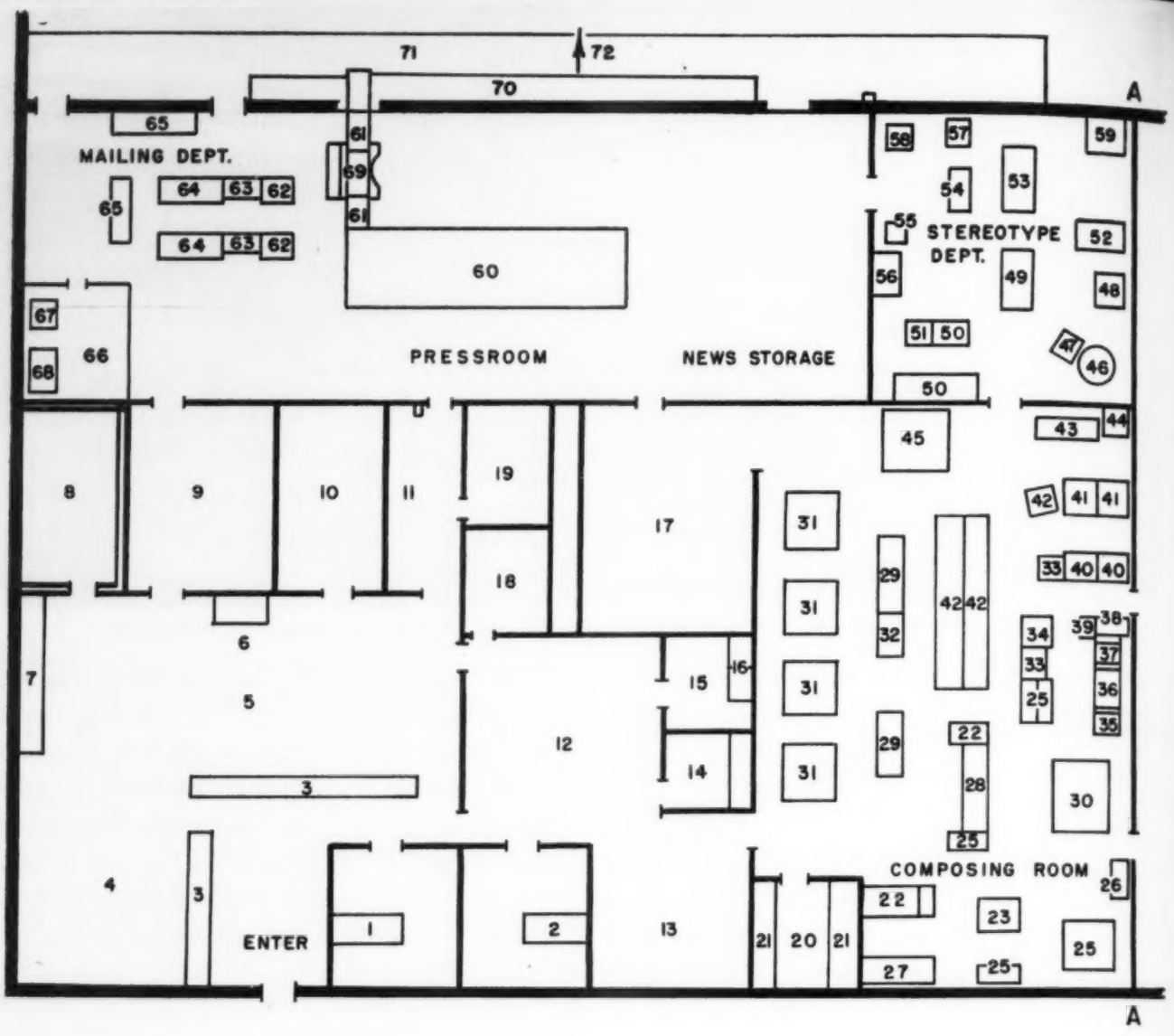
The new building of the Miller Publishing Co. was designed by David J. Griswold, and constructed by the Madsen Construction Co. The company moved from a three-story building in downtown Minneapolis to the efficient one-story plant on the western edge of the city. The building contains 23 thousand sq. ft. and is constructed of Cranbrook masonry throughout on a slab foundation. Featured are extensive use of natural wood millwork and paneling. The building's entrance of redwood, panel glass and stained glass removed from the old building features an angular step arrangement following the entrance wall lines, providing three areas of landscaping. Off-the-street parking for approx. 60 cars is at the rear of the building. Streamlined pressroom facilities are provided in the plant which makes possible straight-line production by the mechanical department for the first time in the firm's 83-year history. There are 13 thousand sq. ft. in the production area. In the pressroom, measuring 7000 sq. ft., are incorporated recommendations of the International Printing Pressman's Union for humidity control. A new No. 46 Miehle, two-color press was installed just prior to the completion of the new plant. Two Dexter pile feeders were installed on two of the three No. 2 Miehle presses which were removed from the old plant. Other new equipment includes a Christensen gang stitcher with eight stations and an attached McCain heavy duty three-knife trimmer, which is unusual in that the books may be delivered either through the trimmer or via the regular packer. A Chandler & Price 10 in. by 15 in. job press and a Kelley press were also removed from the old plant and installed in the new location. Included in the composing room equipment are three Intertypes, a Ludlow and Elrod. The pressroom is operated two full shifts each day, while in the composing room there is a part crew on the second shift. V. T. (Tom) O'Dea is production superintendent; Delbert Rudolph is composing room foreman and Louis Bohl is pressroom foreman. The pressroom and paper storage sections have "Climate conditioning" to properly condition the paper for ease of handling and to insure high quality printing. A distinctive feature of the new building is the clubroom, an adaptation of the quaint old-world room

Outside view of new Miller plant from club room end toward the composing room end.

the former building. Fifty feet of the 225 ft. frontage of the new building are given over to the library and clubroom. Red quarry tile is used in the entrance and clubroom area; the remainder of the building is floored in a variety of tiles. Fluorescent lighting is used; fixtures are recessed in the office area and suspended in the mechanical area. Specialty rooms, such as the reception area, library and clubroom have incandescent lighting. One of the big new values of the suburban building is the shot in the arm that it is giving employee morale, says the Miller Publishing Co. management. It was surprising, too, how easy it was to discard old, time-worn and costly office procedures, once the move to the new quarters was made. Miller Publishing Co. produces five business papers. They are *The Northwestern Miller, Feedstuffs, The American Baker, Croplife,* and *Milling Production.* Officers of the firm include Carroll K. Michener, chairman of the board; Harvey E. Yantis, president; and Milton B. Kihlstrum, executive vice president.

Commercial Printing Co., Raleigh, N. C.

Commercial Printing Co. more than doubled plant area when it moved into its new building. Instead of 6000 sq. ft. on three floors as in the old arrangement, the company now occupies 13,000 sq. ft. all on one floor. Architect for the building is F. Carter Williams and the contractor is John F. Coffey and Son. The front of the building is almost entirely glassed in, and faces south toward a city park. The glass is covered with linen finish venetian blinds in a green color which matches the walls. The whole plant is fluorescent lighted; has concrete floors and brick walls which are painted a light green. The roof of the building is constructed with structural steel beams so that there are no columns at all in the manufacturing area. The plant is arranged so that the job and cylinder presses are on each side of the composing room, which makes it more convenient to lock up the forms for each kind of press. The stock room is completely enclosed and adjoins the bindery. The office ceiling is finished with acoustical material and the floor is finished in c Vinyl tile. The office color scheme is light green and yellow. The north and west walls are green and the east wall a soft yellow. The office is furnished completely with steel desks. The office also is air conditioned and the whole plant is heated with natural gas. Besides the many advantages within the building, the company now has a private alley for loading and unloading. The building is designated to take another floor if it is needed.



Equipment Key for the Projected Journal Pr

NEWSPAPER SECTION

OFFICES

1. Publisher's Office
2. Editor's Office
3. Counters
4. Accounting
5. General Offices
6. Display Advertising
7. Files
8. Vault
9. Conference
10. Morgue
11. Clothes Closet

EDITORIAL

12. News Room
13. Offices
14. Proof Readers
15. Wire Room
16. Teletype
17. Men's Locker
18. Men
19. Women

COMPOSING

20. Dispatch
21. File Cabinets
22. Composing Foreman
23. Class. Ad Dump
24. Class. Ad Linotype
25. Galley Cabinets
26. Magazine Rack
27. Table
28. Ad Dump
29. Dumps
30. Ad Linotype
31. News Linotypes
32. Proof Presses
33. Saws
34. Miterer
35. Flat Cabinets
36. Ludlow Machine
37. Ludlow Matrix Cabinet
38. Signature Cut
39. Slug Cabinet
40. Ad Banks
41. Ad Cabinets
42. Page Trucks
43. Elrod Machine
44. Strip Material Cabinet
45. Stereo Mat Roller

STEREOTYPE

46. Metal Pot
47. Casting Box
48. Scorcher
49. Tail Cutter
50. Table
51. Shear
52. Plate Caster
53. Hoe Shaver
54. Chip Block
55. Stereo Saw
56. Bench
57. Jig Saw
58. Router
59. Pig Pot

PRESSROOM

60. Press
61. Conveyor

MAILROOM

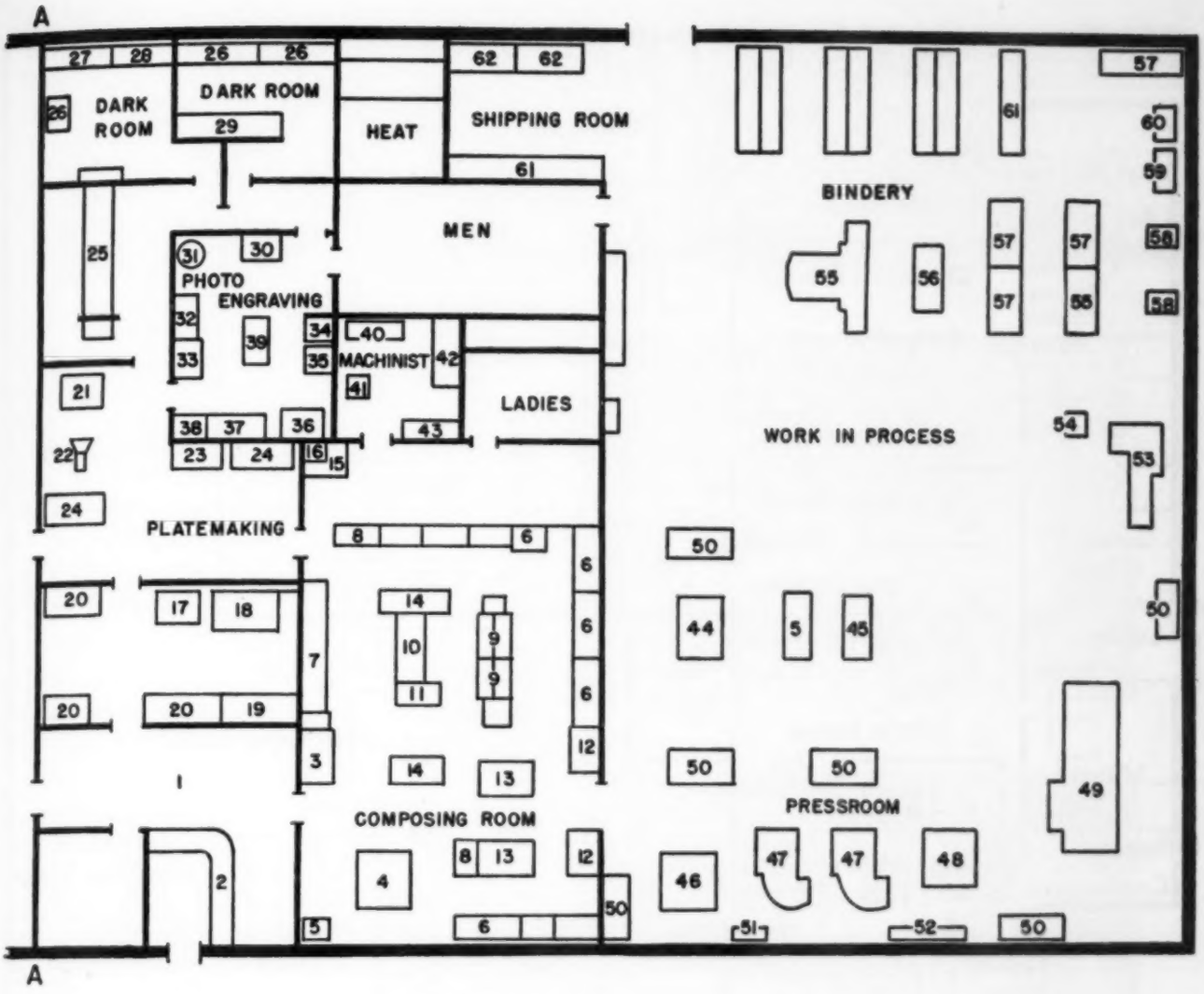
62. Table
63. Addressing Tables
64. Table
65. Mail Sacks
66. Circulation Room
67. Graphotype
68. Table
69. Mailing Table
70. Boys Table
71. Loading Platform
72. Garage

AA—Wall separating newspaper section of Journal Printing Co. plant from commercial printing section.

A building project, for which the ground will be broken around the first part of April, is being planned by the Journal Printing Co. of Stevens Point, Wis. This is a combination daily newspaper, commercial, and offset printing plant. Annual business volume for the company is approx. $1 million.

Dimensions of the new building are 217 ft. by 120 ft. while estimated cost of the building is $500 thousand.

In the Journal's combination plant, use of some of the mechanical departments is to be shared to avoid duplication of equipment. Common usage



Journal Printing Company Building, Stevens Point, Wis.

COMMERCIAL SECTION

1. Office
2. Counter

COMPOSING

3. Foreman's Desk
4. Linotype
5. Magazine Rack
6. Type Cabinets
7. Cut and Galley Cabinets
8. Galley Cabinets
9. Galley Cabinets with Work Tops
10. Table
11. Band Saw
12. Chase Rack
13. Imposing Table
14. Proof Presses
15. Janitor's Room
16. Sink

PHOTOENGRAVING

17. Stripping Table
18. Lineup Table
19. Files
20. Tables
21. Vacuum Printing Frame
22. Arc Lamp
23. Sink
24. Table
25. Camera
26. Film Cabinet
27. Sink
28. Table
29. Cabinets and Work Top
30. Retouching Table
31. Whirler
32. Drying Table
33. Shear
34. Burner
35. Cooler
36. Powder Cabinet
37. Etching Machine
38. Sink
39. Rollup Table

MACHINIST

40. Lathe
41. Drill
42. Bench
43. Cabinet

PRESSROOM

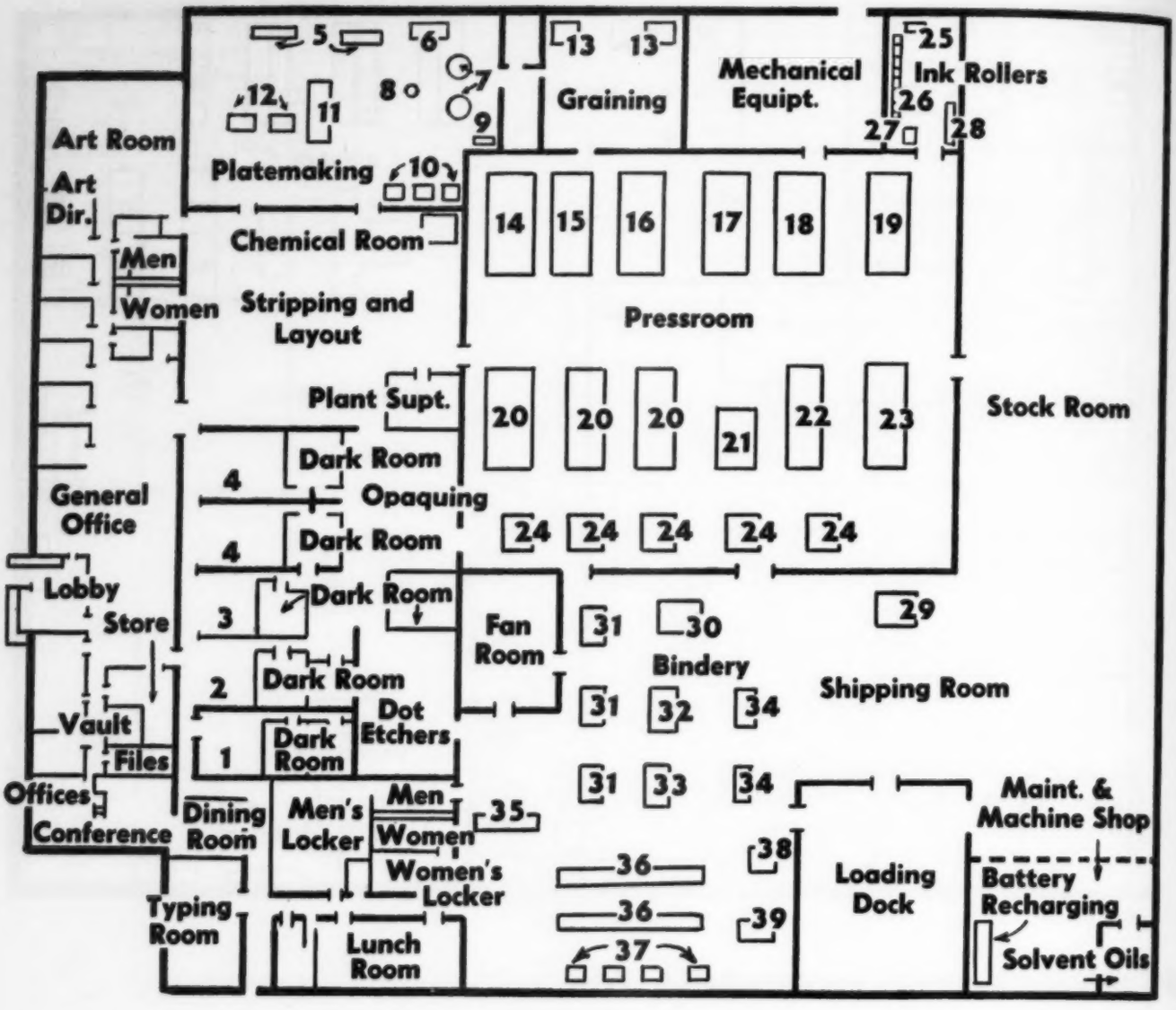
44. ATF Chief 17 in. by 20 in. Press
45. Davidson Press
46. Heidelberg Press
47. Miehle Vertical Presses
48. Hand Fed Job Press
49. Kelly No. 2 Press
50. Table
51. Ink Cabinet
52. Roller Cabinet
53. Folder
54. Jogger

BINDERY

55. Lawson 39 in. Cutter
56. Cutter Table
57. Tables
58. Stitchers
59. Perforators
60. Drill
61. Shelves
62. Shipping Tables

of one linecasting department for both the commercial division and the daily newspaper division is contemplated. Also, a common camera and darkroom is contemplated for the photoengraving department of the newspaper division as well as photoengraving and offset platemaking for the commercial division. Both the darkroom and the linecasting sections are located in the center of the building for easy accessibility by both divisions.

The Journal Printing Co. is growing rapidly under the direction of President Weldon C. Leahy and Manager James E. Cashin. To meet the expansion, the layouts of the various departments have been engineered for expansion toward the rear of the building. Paul J. Ocken, general manager for Graphic Arts Industry, Inc., Minneapolis, Minn., planned the layout of the production equipment in this combination plant.



Photopress, Incorporated, Broadview, Ill.

Photopress Equipment Key

Photographic Dept.

1. Consolidated 31 in. Color Camera
2. Valette 26 in. Line Camera
3. Valette 31 in. Small Halftone Camera
4. Valette 40 in. Line Cameras

Platemaking Dept.

5. Rutherford Photo - composing Machines
6. Vertical Whirler
7. Large Horizontal Whirlers
8. Small Horizontal Whirler
9. Large Vertical Whirler
10. Vacuum Frames
11. Table with 8 Banks of Infrared Lamps
12. Blueprint Driers

Graining Room

13. Zarkin Grainers

Pressroom

14. Harris 35 in. by 45 in. Two-color Offset Press
15. Harris 41 in. by 54 in. Two-color Offset Press
16. Harris 42 in. by 58 in. Two-color Offset Press
17. Harris 41 in. by 54 in. Single-color Offset Press
18. Harris 42 in. by 58 in. Single-color Offset Press
19. Harris 52 in. by 76 in. Four-color Offset Press
20. Harris 35 in. by 45 in. Single-color Offset Press
21. Packing Table and Rack
22. Harris 52 in. by 76 in. Two-color Offset Press
23. Harris 42 in. by 58 in. Four-color Offset Press
24. Single Color Job Presses

Ink Roller Room

25. Ink Matching Table
26. Ink Shelves
27. Three Roller Ink Mill
28. Jomac Roller Cleaner

Bindery

29. Seybold 64 in. Autospacer Cutter.
30. Seybold 57 in. Cutter
31. Cleveland Folders 24 in. by 20 in.
32. Cleveland Folder 25 in. by 28 in.
33. Cleveland Folder 22 in. by 28 in.
34. Cleveland Folders 28 in. by 42 in.
35. Macey Collater
36. Christensen Gang Stitchers
37. Single Stitcher
38. Seybold 37 in. Cutter
39. Seybold 51 in. Cutter

To be able to operate in a one-story structure, with all departments in line with the flow at work, and have plenty of parking space available was enough additional impetus to start plans in that direction when the management of Photopress, Incorporated, was faced with an expiring lease in Chicago. In 1955 construction of a steel, frame and brick building in Broadview, Ill. was completed, providing 86,000 sq. ft. of manufacturing and office space. The building is flanked by parking facilities and space to expand on a 5 A. plot. Graham, Anderson, Probst and White were the architects; and Sherman Olson, Inc., the general contractor. Photopress obtained a 25 year lease with an option to purchase from the New England Mutual Life Insurance

Co., at a rental of about $1.9 million.

In its former location, Photopress conducted operations on six floors. In some cases only a portion of the floor was available to the firm. Paper was stored in the basement. The pressroom was on the third and fifth floors, the bindery on the fourth floor and the office on the sixth. Additional storage space was on the seventh floor. It was necessary to rehandle paper two or three times from the start to the finished product. The elevator in the building available to Photopress was shared by other tenants. Like the others, the firm had its share of waiting time for the elenator.

The only access to shipping docks was a small alley. Sometimes it was impossible for trucks to get to the docks. Frequently they waited anywhere from ½ hr. to 2 hrs. There were no parking facilities for employees or customers.

Growth of Photopress

Photopress was founded in 1929 by E. J. Chalifoux and his father, the late Samuel G. Chalifoux. Prior to the establishment of the business, E. J. Chalifoux had been selling lithographic equipment and supplies. He felt strongly that there was a bright future for lithography. He rented quarters at 725 La Salle St., Chicago and started a shop. His equipment consisted of a small camera, a Harris S7L single color 35 in. by 45 in. press, a guillotine cutter and whirler and vacuum frame for platemaking. Color work was done in solid colors only.

(Continued on Page 98)

Fig. 1—On the management team of Photopress, Inc., are (left to right) James J. Chalifoux, assistant vice president; Robert S. Chalifoux, treasurer; and Raymond S. Chalifoux, vice president in charge of manufacturing. They are seated in the conference room which can be converted into temporary living quarters for business guests.

Fig. 2—Eight banks of infrared lamps hasten drying of plates after they have been developed. Sam Amodee, shown here, is one of the first three men employed by Photopress after the company was founded in 1929.

Fig. 3—Horace Bowden, pressroom supervisor, is also one of the first three men hired by Photopress. Bowden is shown at the packing and inspection table. The rack holds up to six rolls of packing paper. The surface of the table is striped with white paint and marked off in black lettering to designate size of makeready sheets to coincide with press sizes.

Vancouver (Wash.) *Columbian*

The new plant of the Vancouver (Wash.) *Columbian* was signed with an eye on the future. Basically it is of one-ory design with a half basement. But it has been con-ructed so that a second story can be added later when eeded. The 150 ft. by 130 ft. building contains 29,250 sq. ft. floor space, 19,500 sq. ft. on the first floor and 9,750 sq. ft. the basement. It is built of reinforced concrete; exterior ished in architectural concrete painted gray with burgundy m. Brown-gray and green stone was used in the entryway the lobby. Plate glass was used extensively, with special at and glare resistant glass used on the south side of the ilding. Inside walls are partly finished in plaster and part-in striated composition fiber. Asphalt tile is used on the floors. Ceilings are made of fireproof mineralized acoustical tile in two patterns. Formica has been used on counter tops. The floor in the composing room has been finished in maple wood. Gangs of fluorescent lights, three tubes to each 8 ft. section, have been used in the newsroom, business offices, stereotyping and composing departments. Incandescent lighting was used in work areas such as the pressroom and storage areas. A system of continuous redistribution of air was installed to serve the building in both the summer and winter. Roof sprinkling system plus full insulation combine with the blower-powered ventilation system for summer cooling. Day W. Hilborn of Vancouver, Wash., was the architect of the building; White Construction Co. the general contractor.

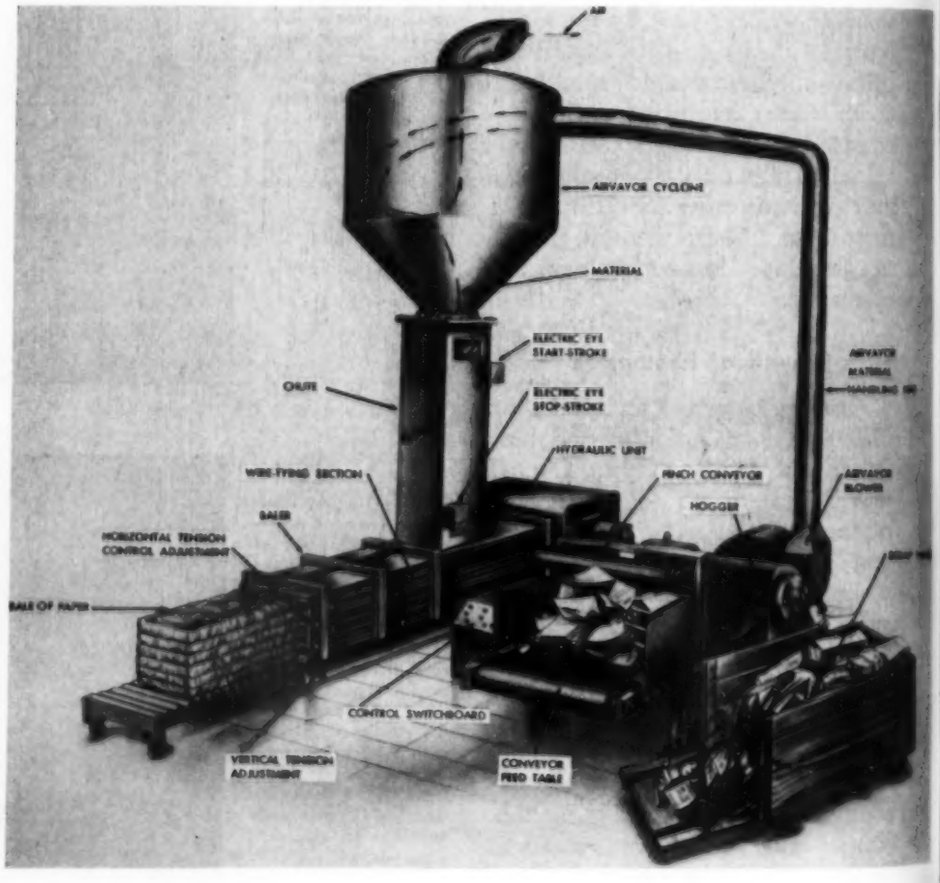
Waste Materials Baling Automated

The automatic and economical disposal of scrap paper can be a major problem in many converting and publishing plants. A recent development for automated baling of large quantities of die cut scrap paper, trimmings, corrugated boxes, Cellophane and the like has been developed by Balemaster Div., East Chicago Machine Tool Corp. With the Cyclomatic equipment one man can bale as much a 4 T. of scrap paper per hr., in bales up to 1,000 lbs. each. Completed bales measure 26 in. by 32 in. in any length up to 72 in.

As is shown in this parts-identified illustration, paper is fed onto a conveyor feed table and is forced through pinch rolls into a hogger for chopping into small pieces. From the hogger, the chopped pieces are then blown through an airvayor pipe and then into a cyclone where the air is exhausted and the pieces drop by gravity into a hydraulic baler. Photoelectric eye switches automatically control the baling ram cycle so that uniform amounts of paper are baled. The entire equipment is floor mounted all on one level in a 23 ft. by 23 ft. area.

All operations are done under cover to eliminate dust and dirt. Motors and controls are dust and explosion-proof.

Some specifications for equipment are as follows: Feed table conveyor width is 54 in.; travel length is 12 ft.; height from floor is 26 in.; conveyor speed is 175 surface ft. per min. driven by 1 h.p. gear motor; throat opening is 60 in. by 14 in. max.; height 36 in. above floor; number of blades is 16 running at 900 r.p.m., with 25 h.p. or 50 h.p. motor. Airvayor cyclone is 7 ft. diam. by 12 ft. 2 in. high; blower capacity 6200 c.f.m., 10 h.p. motor. Vertical feed chute, 12 ft.; width 27 in.; depth 32 in. Overall dimensions of the Jumbo horizontal baler are: Length 20 ft. 1½ in.; width 5 ft. 7 in.; height 4 ft. 4 in. Power unit is a 15 h.p. hydraulic vane type pump; ram cycle 11 sec. with automatic reversal; welded all-steel construction.



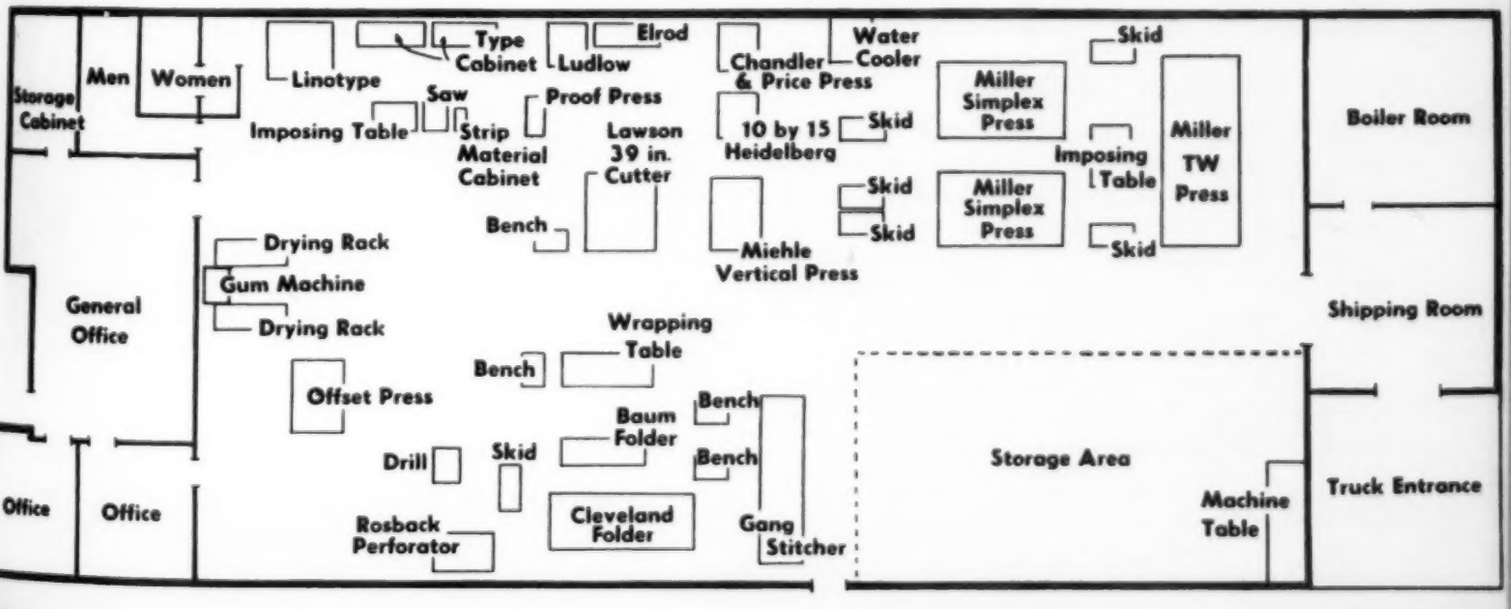
Star Press, Inc.
Shelby, N. C.

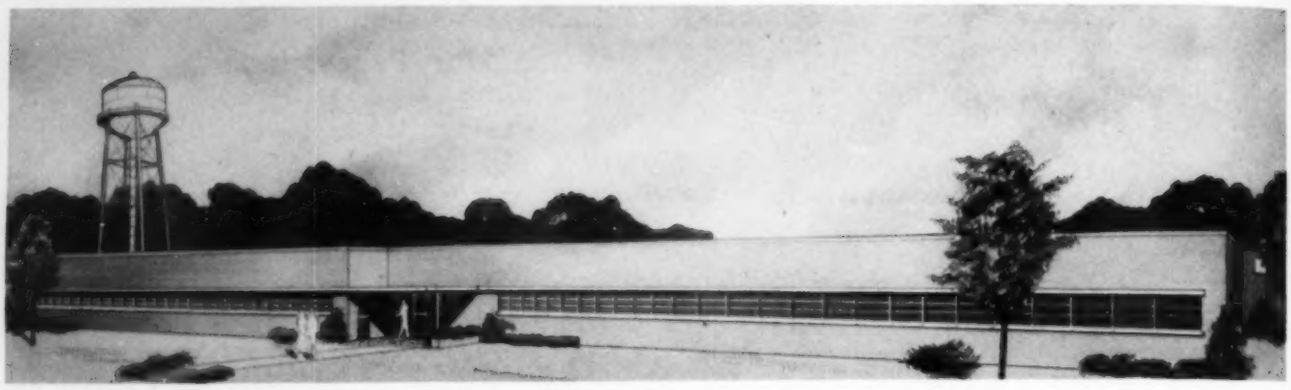
Small but modern is the slogan of the Star Press, Inc., Shelby, N. C., since that firm's move into its new quarters. The new plant is an attractive brick structure specifically adapted to the firm's commercial printing business. The company does letterpress and offset printing, including color work, for local business concerns. This includes printing booklets, leaflets, catalogs and business forms. The new Star Press building is a one story building containing 7000 sq. ft. of floor space. It is air conditioned the year around with Carrier Corp. equipment The main shop floor is concrete. The plant is equipped throughout with straight-line fluorescent lighting. Off the street parking space is provided at the front of the building for Star Press customers. Additional parking space is provided in the rear of the building for about 25 cars. There is also space for trucks at a receiving and shipping dock entrance at the rear of the building. Architect for the building was the local firm of Breeze Holland & Riviere of Shelby, N. C. All local contractors were used, too, including Virgil McIntyre, contractor; Carl Grigg, lighting and electrical connections; O. C. Wilson heating and air conditioning; Campbell Roberts, plumbing contractor; and Spangler and Sons for the driveway and other concrete work.

This is an inside view of the new plant of the Star Press. It is taken toward the upper right hand corner of the floor plan seen below. Note especially the portable roll stand in the background. The line on the floor seen going up the lower righthand side of the picture is the isle marking down the center of the building. It leads to double swinging doors along the back wall of this room. That is the shipping room which in turns opens to the truck entrance. The floor is concrete and the ceiling is finished in an acoustical board in the production area. Note, too, the partial skid of paper to the right background. Star Press utilizes hand trucks to move the skids.

Other Improvements

Besides moving into a new plant, Star Press has improved itself by adding new equipment. Included in the new equipment is a 17 in. by 22 in. Harris Offset Press and a folder. In 1940 the company got into color work and successively bought both one and two-color presses. All pressroom equipment has been traded and renewed until today all machinery is under 12 years old. Foreman of the production department of the Star Press is Troy Barkley.





The Standard Publishing Foundation, Mt. Healthy, O.

For almost a year, The Standard Publishing Foundation has been occupying its new office and plant building at Mt. Healthy, O. That is a small suburban town approx. 15 mi. north of Cincinnati, O. The one-story building occupies approx. 4 A. of ground, in addition to which there is parking space for approx. 125 cars. Some of this parking space is divided off for employees; the balance is for customer and business parking. The building area itself contains approx. 174 thousand sq. ft. of floor space and cost more than $1¼ million to build. The front of the building is faced with buff brick while the factory and warehouse walls are of tile construction. A total of 115 thousand sq. ft. of factory and office space is air conditioned by Carrier equipment. The warehouse, which contains raw and printed stock, consists of approx. 60 thousand sq. ft. and is not air conditioned. In the factory section of the plant, cement flooring prevails. A sprinkler system has been installed throughout the plant. Lighting is by continuous strip, drop-fixture fluorescent lighting in both offices and plant. The company also maintains a cafeteria for its more than 400 employees. J. & E. Warm Co. were the architects of the plant.

What Standard Publishing Is

The Standard Publishing Foundation is a non-profit organization devoted to printing non-denominational religious publications for sale at the lowest possible prices. Ninety percent of the work done is by offset; the balance by letterpress. Most of the work is in color, much of it four-color process. One interesting feature of the new plant is a bookstore where all of the Foundation's own publications are sold at low prices. James Johnson is general manager of the Foundation, and William Bell is general superintendent.

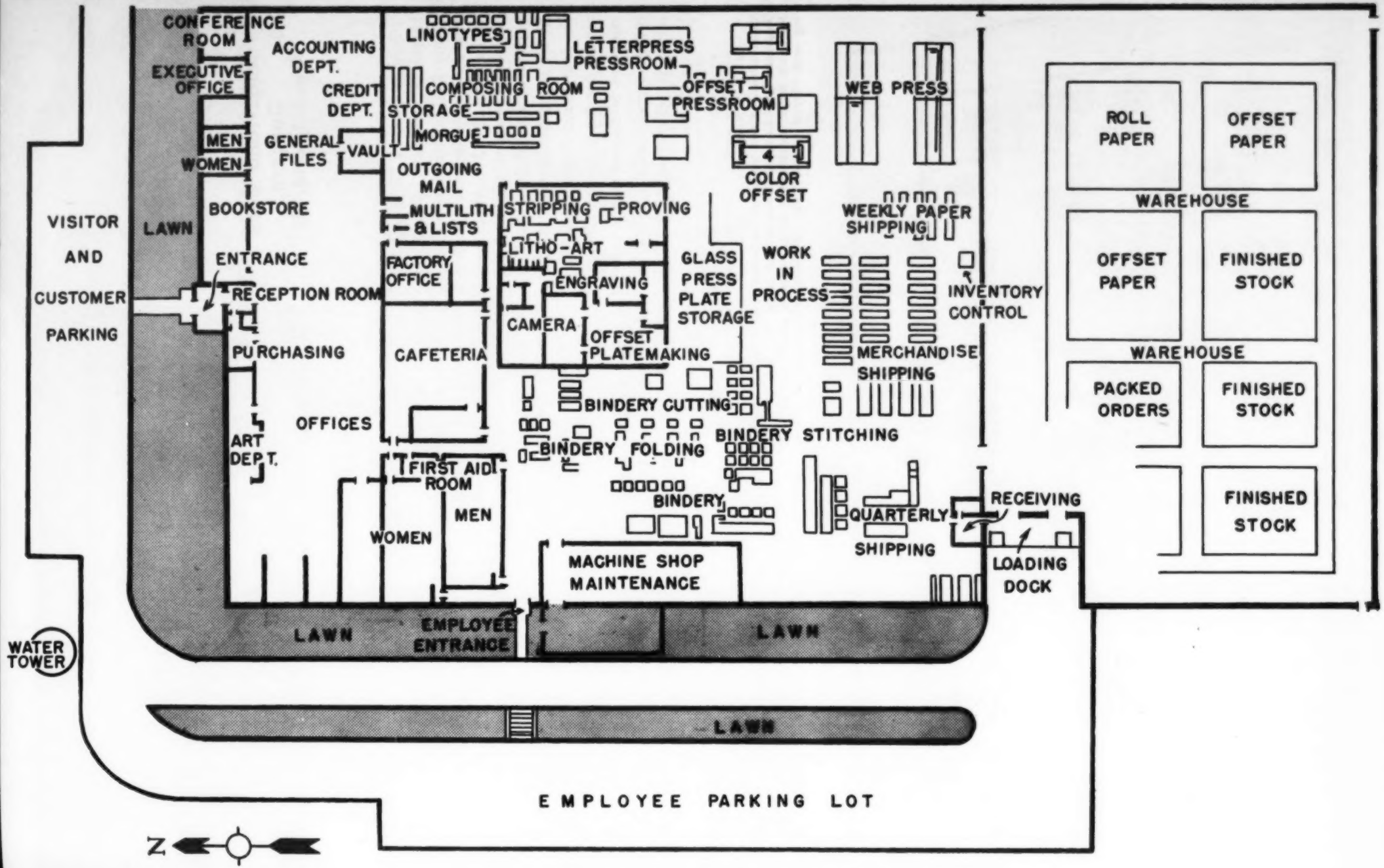
Plant Improvement at Standard

In the composing room, one of the dominant features is the cut storage system in which hundreds of thousands of cuts are filed and readily indexed for quick delivery. Bulk of the composition is done on six Linotype machines, foundry type for display. A Monotype Material Maker casts strip material from 1 pt. to 36 pt. body. A Vandercook 4T proof press is employed for transparencies.

Some of the equipment in the offset platemaking departments consists of three Zarkin plate coaters, two Lanstron Monotype photocomposing machines, a Roberston 24 in. camera for black work, a Consolidated 31 in. vacuum back color camera. A Wagner lithopress and a Craftsman Lineup table are used for exact register. Three stripping tables are kept busy.

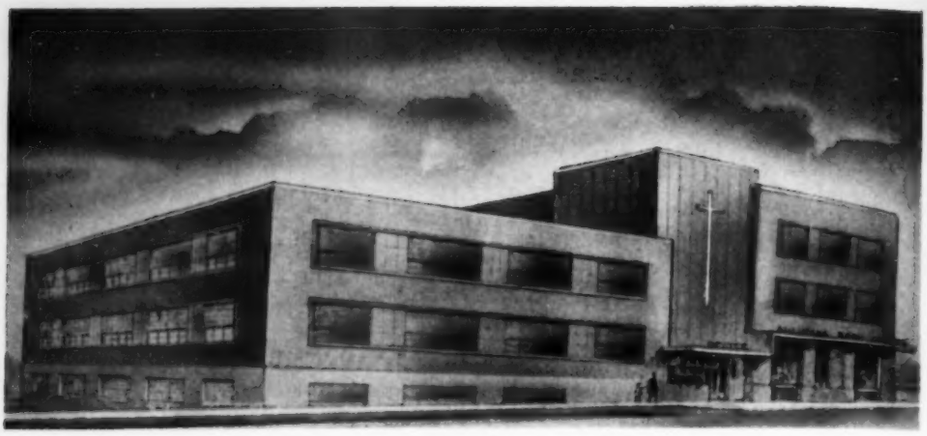
One of the new presses is a Webendorfer roll fed offset press. This press is operated three shifts a day doing color work. The press prints approx. 10 T. of paper a day. It's equipped with an Offen multi-stage heat set drier. Publications printed on this press are produced at 12 thousand per hr., folded, pasted and ready for the mailroom. Another of the new presses installed in the plant is a Miehle 42 in. by 58 in., four-color offset press on which can be printed 5800 to 7000 sheets per hr.

The Foundation's bindery is a busy place. Its primary equipment consists of five Baum folders, two Dexter folders and two Chandler and Price paper cutters. There is a six section collator, equipped with six Baum feeders which was designed by the Foundation's engineering staff. In addition, to the above, there is a Christensen six station gathering machine for saddle stitched work and a McKane six station collating, saddle stitching and trimming machine. A Brackett trimmer for card work is also employed.



Plot Plan and Floor Plan of The Standard Publishing Foundation

Augustana Book Concern Rock Island, Ill.



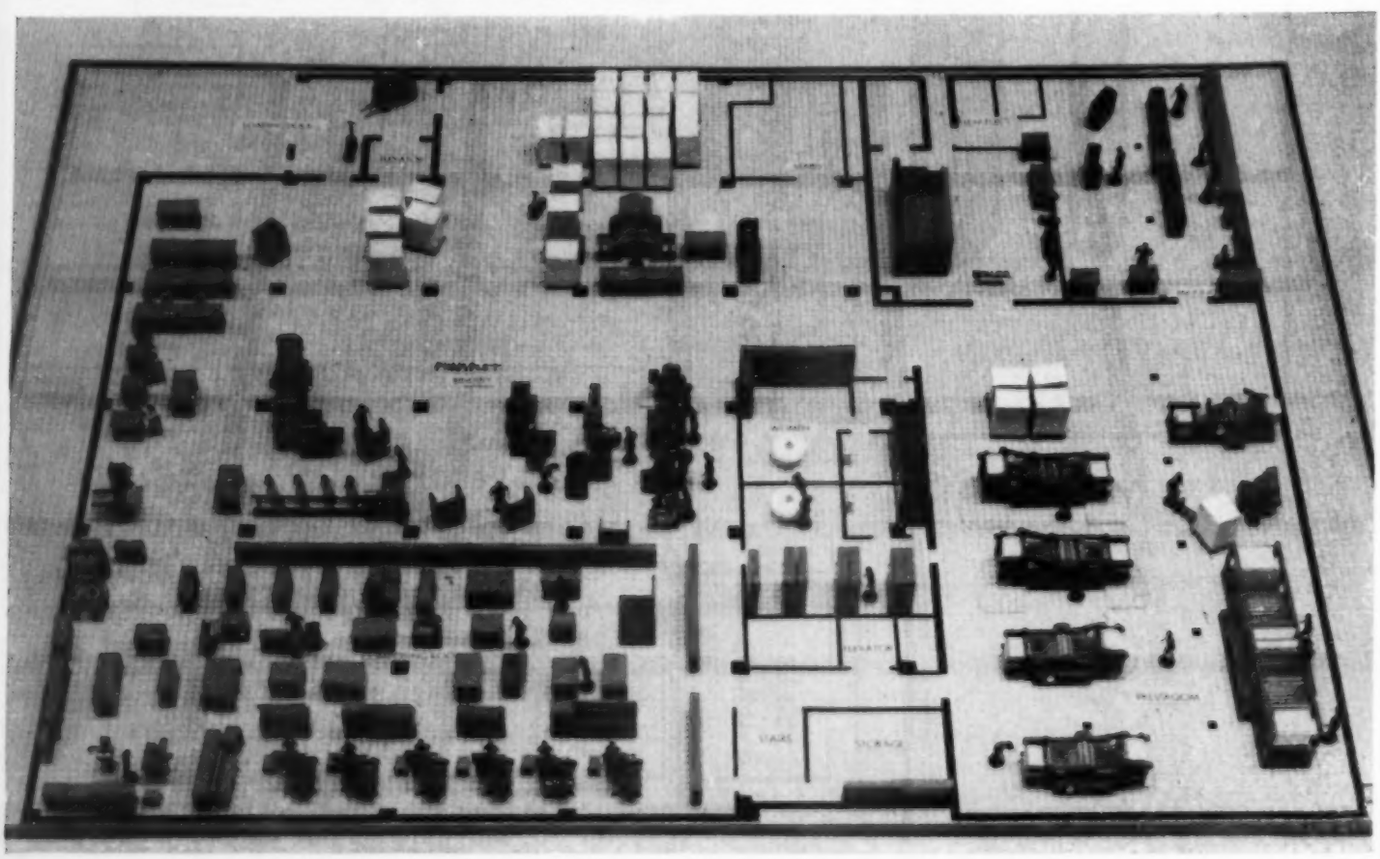
Augustana Book Concern, Rock Island, Ill., will soon be doing its yearly $200 million printing business in a projected new building in the same city. Augustana Book Concern, known as religious book and publication printers, is owned by the Lutheran Church of America, Augustana Synod. Although owned by the Lutheran Church, one-third of the company's printing volume consists of work for other denominations.

Floor space in the three floor building will be 100,000 sq. ft. In planning the modern building, continuous run fluorescent lighting throughout the plant was included. Air conditioning will be installed in every department. There will be concrete floors in all mechanical departments.

On the ground floor of the building will be located mechanical departments, composing room, pressroom, bindery and mail room. The first floor will contain production and editorial offices, storage and the lunchroom. General offices, the conference room and general manager's office will be on the second floor. Also on the second floor, space will be provided for future expansion.

Architect for the approx. $800 thousand building is Swanson & Maiwold of Moline, Ill. Paul J. Ocken, general manager for Graphic Arts Industry, Inc., Minneapolis, Minn., planned the layout of the production equipment.

Below is one of the production equipment layouts for the projected Augustana Book Concern building in Rock Island, Ill. Included in the layout are shown the composing room, pressroom, bindery and the mailing room. Layout was by Paul J. Ocken, general manager of Graphic Arts Industry, Inc., Minneapolis, Minn. The company believes the use of three dimensional models, in addition to a flat drawing of the floor plan, facilitates plant planning.



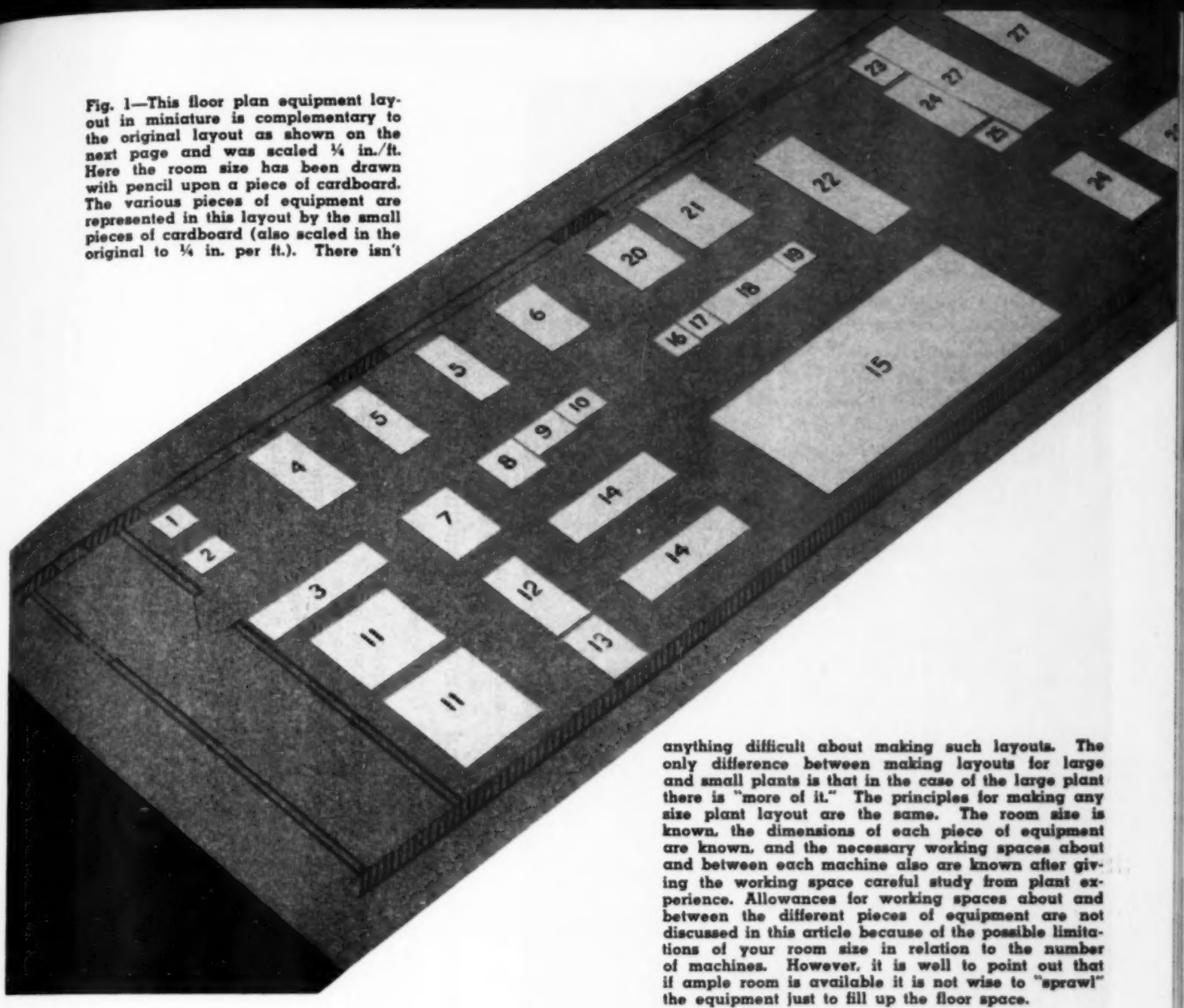


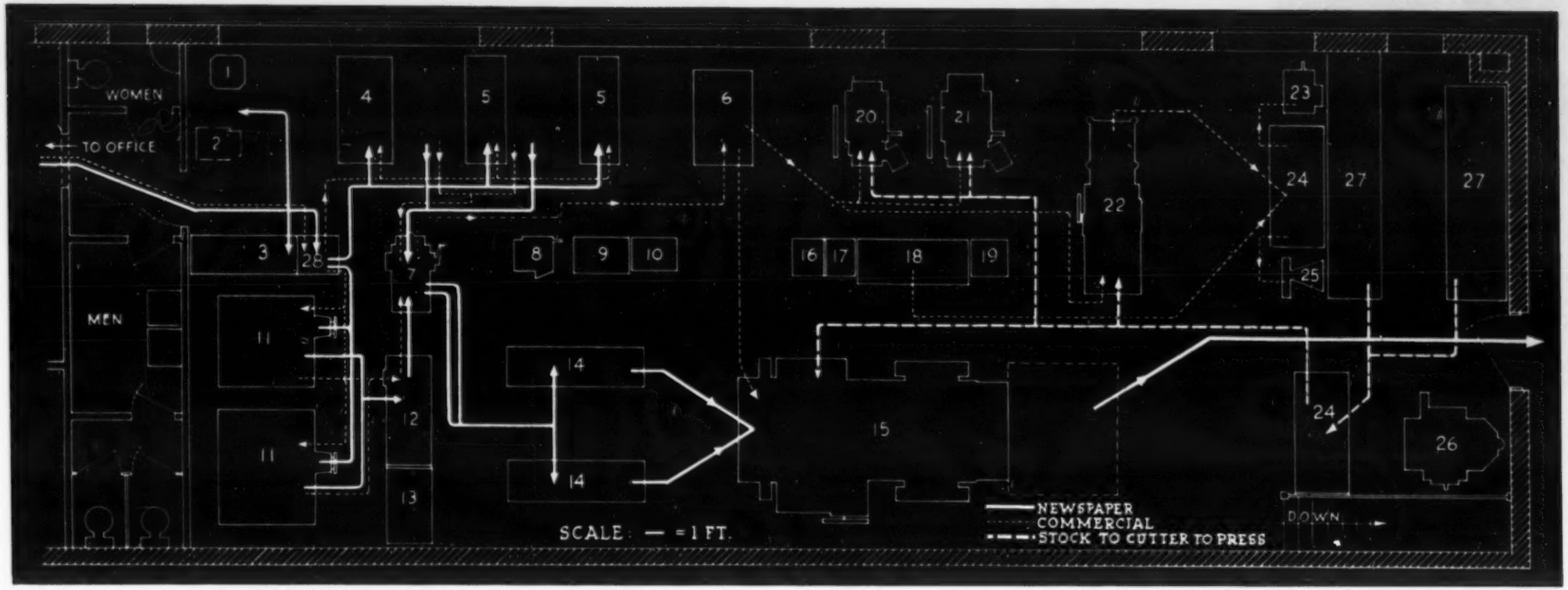
Fig. 1—This floor plan equipment layout in miniature is complementary to the original layout as shown on the next page and was scaled ¼ in./ft. Here the room size has been drawn with pencil upon a piece of cardboard. The various pieces of equipment are represented in this layout by the small pieces of cardboard (also scaled in the original to ¼ in. per ft.). There isn't anything difficult about making such layouts. The only difference between making layouts for large and small plants is that in the case of the large plant there is "more of it." The principles for making any size plant layout are the same. The room size is known, the dimensions of each piece of equipment are known, and the necessary working spaces about and between each machine also are known after giving the working space careful study from plant experience. Allowances for working spaces about and between the different pieces of equipment are not discussed in this article because of the possible limitations of your room size in relation to the number of machines. However, it is well to point out that if ample room is available it is not wise to "sprawl" the equipment just to fill up the floor space.

Equipment Layouts—

How To Make Them To Scale

A floor plan or equipment layout in a printing plant is something that should not be taken for granted—ever. The workflow in a department is of such prime importance in relation to costs that it should be under the supervising executive's scrutiny at all times. Equipment layouts, in common with production machinery, become obsolete. It is just possible that when the equipment was first placed in the department the volume and times-of-receipt-of-work were thought to be fixed. However, since that time the work coming into the plant has changed in character or there may be more of it. There comes a time in all plants when even a partial change in the position of the machinery might be desirable. Before a printing plant is to be moved into a new location or a department is to be shifted to another room, a miniature equipment layout should be prepared. Making such a layout provides you with an exact picture of the proposed new arrangement.

To many executives, the problem of contemplated changes causes them to avoid making them because they do not have a definite method for planning *before* the changes are made. A practical way in which the problem can be handled is by means of a miniature layout with movable



Original equipment blue print from which this diagram was prepared by A. C. Arnesen, is published by courtesy of American Type Founders, Inc.

Theoretical Combination Weekly Newspaper and Commercial Printing Plant

Fig. 2—This theoretical diagrammatic representation of a combined weekly newspaper and commercial printing plant is complementary to the miniature equipment layout shown in the Fig. 1 halftone illustration. The reduction from the original scale drawing of ¼ in. per ft. is reduced in this illustration to about ⅛ in. per ft.

Each printing plant seems to be a problem in itself when planning equipment layouts. This will be obvious to the plant executive—the variations occurring in lot and building dimensions and the volume and kind of printing executed. The building in which this plant is housed is 99 ft. deep by 29½ ft. wide. The printing plant, exclusive of offices and toilet rooms measures 72 ft. long by 27½ ft. wide.

In this diagram, it will be noted that the inside wall is of solid construction without benefit of windows or outlets of any kind. This is not a serious objection inasmuch as fluorescent lighting furnishes comfortable illumination for the important seeing tasks of the printer. This has special reference to a printing plant which may be located on the first floor of a two-story building.

The work flow tracings are self-explanatory. The commercial, newspaper, paper stock and bindery flows are indicated clearly.

1—Metal Furnace
2—Stereotype Casting Box
3—Table for Stereo Equipment
4—Newspaper Type Cabinet
5—Job Type Cabinets
6—Job Imposing Table
7—Proof Press
8—Saw-Trimmer
9—Composing Room Work Bench
10—Cut Filing Cabinet
11—Linecasting Machines
12—Dump-Correcting Table
13—Machinist's Work Bench
14—Makeup Tables
15—38 in. by 52 in. Cylinder Press (Newspaper and Job)
16—Job Chase Rack
17—Cylinder Chase Rack
18—Drying Rack and Stock Table
19—Ink and Roller Cabinet
20—10 in. by 15 in. Open Platen Press
21—12 in. by 18 in. Automatic Feeder Platen
22—17 in. by 22 in. Automatic Cylinder Press
23—Paper Drill
24—Unfinished Work Table
25—Stitcher
26—34½ in. Power Paper Cutter
27—Stock Cupboards
28—Foreman's Desk

pieces of cardboard, scaled down to size, to represent the equipment.

Consult the Engineer

We don't feel that any plant executive will take umbrage with us when we make a suggestion regarding plant layouts. At all times the plant executive should seek the counsel and work with a professional engineer. These men possess nimble minds simply because they have made a lifetime study of equipment layouts. Their comprehension of production details and workflow is inclusive. On the other hand, it is your major business to keep production flowing in the plant. Quite often the plant executive "can't see the trees because he is looking at the forest." Mutual discussion with the engineer will be beneficial to you.

The method of making plant layouts through the use of templates is discussed in this article. This method is satisfactory for general use. However, within recent years, the use of three-dimensional miniature replicas of equipment items have been used increasingly by engineers. These are obtainable from several companies who furnish them. They are quite expensive. They do enable anyone to grasp the practicality of any layout quickly, especially if used intelligently.

Since the plant executive is intimately familiar with the functions of the equipment items in his plant, the use of the flat templates will enable him to move them readily over a scaled floor plan. In this way he can try various machine arrangements to see if they are consistent with workflow and materials handling.

Speaking of materials handling, more and more attention is being paid to the subject. It is a subject that should be given major attention in new plant planning or in the revision of an existing layout. It fits right in with workflow. But if proper attention to materials handling is not given, workflow can be slowed up appreciably. The two must be associated—they are inseparable.

Why You Should Make Layouts

Plant executives are becoming more and more engineering minded. It is their business to know beforehand about a good many things connected with plant operation. Making an equipment layout isn't a bit different in principle than when your employer causes a "price blueprint" to be made to determine the selling cost of a job. Nor is it any different than the manufacturer who puts a composing machine or a printing press on paper before starting manufacturing operations. To bring it a little closer, we'll say it's no more difficult than laying out an advertisement, (but it will be a more tedious operation).

Moving machinery can be and often is an expensive operation. Plant rearrangement should not be undertaken unless the moving expense is justified by the production savings to be made as the result of the contemplated moving about of the equipment into an efficient arrangement.

There isn't anything new about miniature equipment layouts. They have been used for years by architects, plant engineers, equipment manufacturers and some plant executives. It would seem, however, that their use by plant executives should be universal.

Since a plant manager, mechanical superintendent or departmental foreman is supposed to know what he is talking about, a carefully worked out miniature equipment layout showing the proposed changes, the production benefits to be derived from the new arrangement and the expense of the change will enable him to sell the idea to his boss in an effective way.

Reasons for Layouts

Some reasons for checking into your equipment arrangement are:

(1) An entirely new location is contemplated.
(2) Production doesn't flow smoothly—there may be doubling up of operations in existing plant.
(3) There is a bottleneck in the work flow. This may be

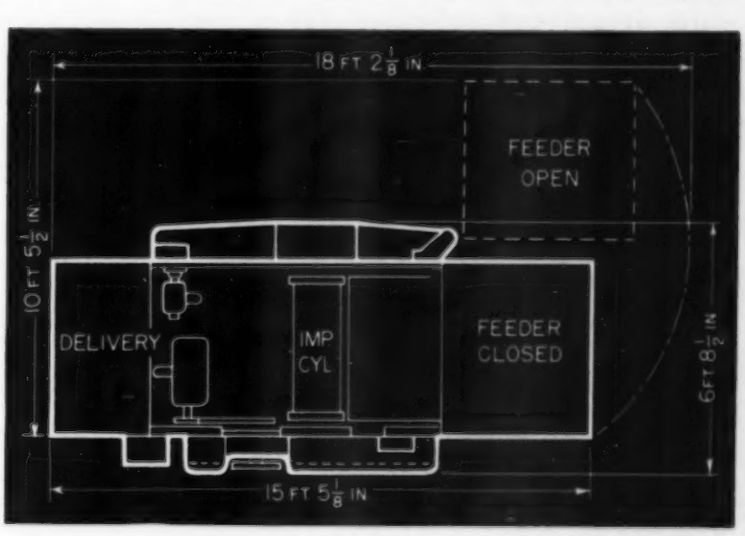


Fig. 3—In this diagram is shown how a scaled down or miniature piece of cardboard (template) may be made for use in planning plant floor plans and/or workflow layouts. The rectangle represents the outside limits of the actual floor space required for a Miller 27 in. by 41 in. SY Single Color Press with necessary swinging space for feeder. Measured from this standpoint, the press is 10 ft. 5½ in. wide by 18 ft. 2⅛ in. long. Scaled down to ¼ in. = 1 ft., the cardboard "model" can be cut 2⅛ in. wide by 4 9/16 in. long. Fractional parts of a foot that do not reduce to 1/16, ⅛, ¼, ½, or ¾ may be disposed of in cutting the templates by increasing the odd figure to the next highest fractional part of a foot.

caused either by faulty arrangement of the equipment or it may be caused by the manner in which work comes into your plant. There may be no remedy for the manner in which work comes into the plant but you may be able to help matters by rearranging the equipment.

(4) It may be necessary to rearrange the equipment because of the installation of additional machinery.

(5) A department may have to be moved to another room in the plant.

(6) Be critical. Check up your layout occasionally from a voluntary standpoint as a matter of good management to see if production costs can be reduced.

Making Equipment Layouts

In making an equipment layout, it is a good idea to draw the floor area to scale in outline with pencil on a sheet of 50 pt. (0.050 in.) cardboard. The preferable scaling down to workable size is ¼ in. per ft. For instance, if the floor area is 40 ft. by 50 ft., the size outlined on the diagram would be actually 10 in. by 12½ in. Graph paper sheets with ¼ in. divisions ruled both ways in light blue ink may be purchased at book and stationery stores.

By means of pieces of cardboard cut to proper scaled-down size, one for each piece of machinery in your plant, it is not a difficult matter to make an accurate layout which will give you a concrete idea as to what equipment arrangement will provide maximum production flow. Placing the small pieces of cardboard on the miniature diagram representing the floor space will enable you to try different arrangements of the equipment. During the process of working out a new arrangement consult your assistants—they may give you some good ideas.

A number of equipment manufacturers have provided kits containing diagrams of some of the principal pieces of equipment used in the printing plant. These may be secured gratis. These are scaled usually ¼ in. = 1 ft. and may be used as templates.

No definite instructions can be given in this article respecting the *proper* allowable working spaces around each individual type of machine. Floor areas vary too much—each layout must be made to order according to the limitations of the floor area available.

If you are blessed with ample floor space, guard against "sprawling" the equipment. From an efficiency standpoint too great distances between production units is as bad as too crowded machinery. Many printing plant executives who have been handicapped by cramped equipment are tempted to go to the extreme in planning a layout for new quarters.

The scale of ¼ in. per ft. with which to work in making layouts seems to be preferable. If ½ in. per ft. were to be used, the floor plan layout would become unwieldy. If the scale of ⅛ in. per ft. is used, some of the pieces representing the equipment would be so small that infinite care would have to be exercised in pushing them about with pencil rubber or some sharp pointed instrument when trying different arrangements.

Cutting the Cardboard

From cardboard cut as many pieces of each kind of machine as you have in the plant. Use 10 pt. (0.010 in.) cardboard. Of course, any thickness of cardboard will be suitable in case the 10 pt. board isn't available.

To furnish a concrete example of the size to cut pieces representing the machinery, we will assume that you want 10 pieces to represent either Intertypes or Linotypes (without auxiliaries). The approximate floor area of each machine is 5 ft. by 4 ft. 9 in. Using the ¼ in. per ft. scale, each piece of cardboard would be cut 1¼ in. by 1 13/16 in. wide. Space for the operator's chair is not allowed for in this measurement.

To illustrate by means of another piece of equipment, the actual floor space required for an ATF Kelly Three press (operating position) is 6 ft. 11 in. by 15 ft. Reduced to approximate ¼ in. per ft. scale size in your layout, the cardboard representing the press would be 1¾ in. by 3¾ in. Loading, unloading and pressman's operating floor space, nor the floor space required for bringing forms to and taking them away from the press have been allowed for in this measurement.

The cardboard pieces should be cut of sufficient size to cover the actual floor space required for the normal extension and swinging out of machine parts, that is, in the case of an older type cylinder press for instance, include the floor space necessary for swinging the feeder and delivery to open position.

Materials Handling Center

Clark Equipment Co. has announced the opening of its new Materials Handling Development Center, established to develop materials handling methods for individual industries. In the announcement Robert H. Davies, vice president of Clark's Industrial Truck Div., sponsor of the project, said that materials handling problems are becoming so complex that it is difficult to develop a single handling machine or method that can be used by all industries. Emphasis must now be put on analyzing and finding solutions for handling problems of individual industries.

Located in its own 20,500 sq. ft. building, the Center will be equipped with both indoor and outdoor proving grounds and test areas. Space is available for small seminar groups as well as large-scale industry-wide sessions.

Glen R. Johnson has been appointed director of the Materials Handling Development Center. He formerly was sales manager for Clark's gas-powered fork trucks and was associated with Clark for 15 yrs.

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Then set your display advertising the modern way—the *profitable* way—on the new Rangemaster Model 35 Linotype. The big mixed composition shown below (actual size) is a good example.

Expensive "cutting in" and costly hand picking and sorting were eliminated because all composition was *keyboarded*. Another saving: the Linotype slugs were delivered ready for lock up without underpinning.

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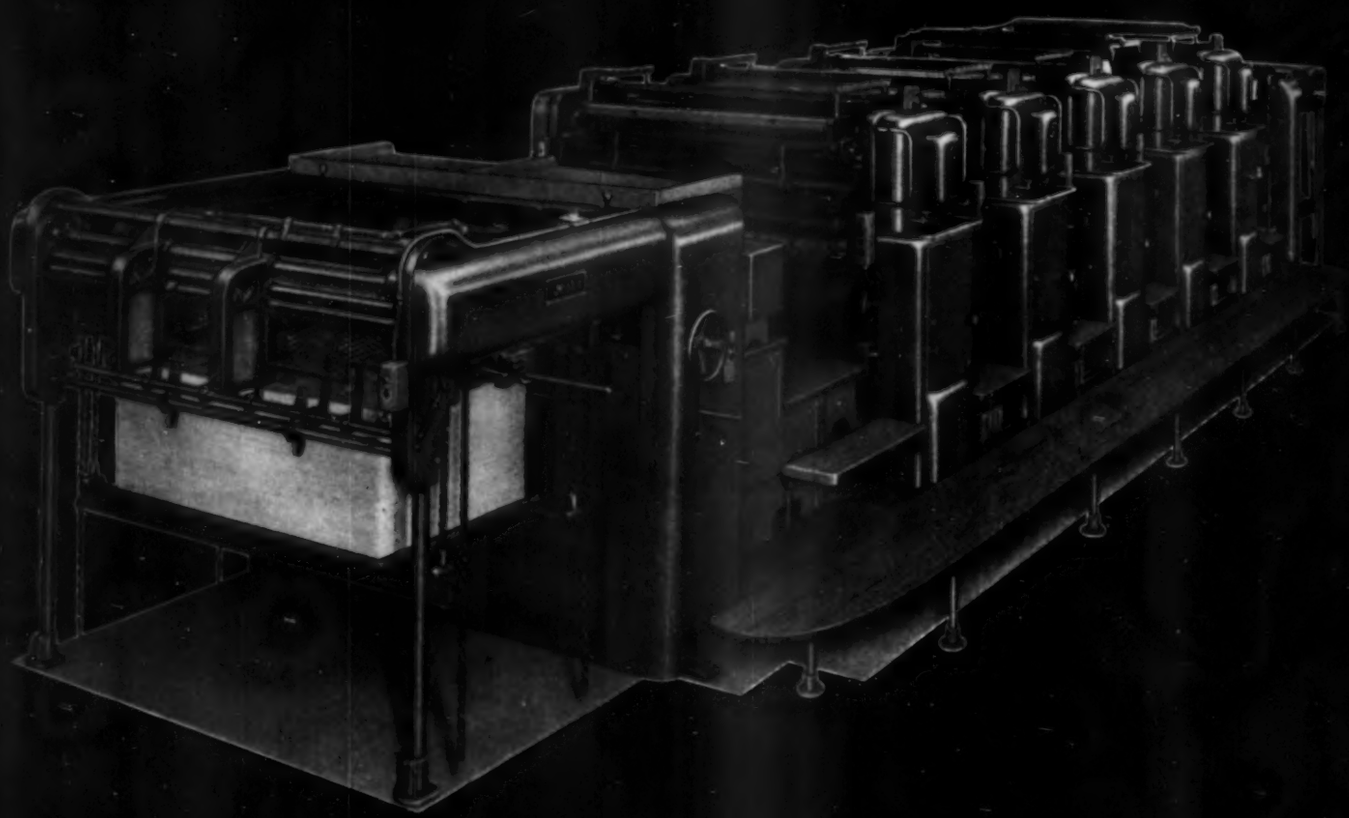

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Miehle 61 and 76 Sheet Fed Rotaries—one color to five color—are operating in label, carton, publication, book and commercial printing plants from coast to coast. High production, simplified makeready, improved quality and unit construction make them the accepted standard of sheet fed typographic rotary equipment.

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Arrow Press, Inc.
New York, N. Y.

The Bookwalter Company, Inc.
Indianapolis, Ind.

The William Byrd Press, Inc.
Richmond, Va.

Colonial Press, Inc.
Clinton, Mass.

Davis, Delaney, Inc.
New York, N. Y.

R. R. Donnelley & Sons Co.
Chicago, Ill.

Evans-Winter-Hebb, Inc.
Detroit, Mich.

Gospel Publishing House
Springfield, Mo.

Houghton Mifflin Company
Cambridge, Mass.

Interstate Printing Co.
St. Louis, Mo.

Kingsport Press, Inc.
Kingsport, Tenn.

Magill-Weinsheimer Co.
Chicago, Ill.

Multi-Color Type Co., Inc.
Cincinnati, Ohio

The Nevins Company
Clifton, N. J.

The Plimpton Press, Inc.
Norwood, Mass.

Publishers Printing Company, Inc.
Long Island City, N. Y.

Rand McNally & Company
Hammond, Ind.

Recorder Prtg. & Publ. Co.
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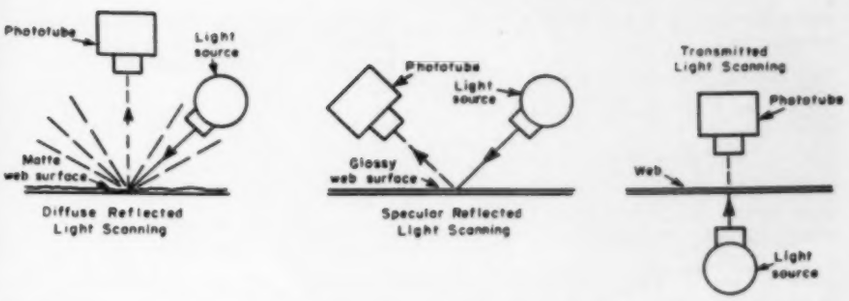

Fig. 8.—Methods of web scanning.

Electronics

(Continued from Page 54)

The "proportional" side register control system is supplied with a rotary lens scanner which rapidly swings a light beam in an arc across the line (broken or solid), or edge to be guided. Every time the beam sweeps the line or edge a voltage pulse is generated in the phototube. In other words, the scanner for this system is of the dynamic type. It makes corrections at a speed proportional to the amount of mis-register. How this system works is shown in Fig. 7.

It is interesting to note that photoelectric web scanners for register control, are designed to operate by one of the three methods shown in Fig. 8. At the left is shown scanning with diffuse reflected light which would be the condition where material with a matte surface is being run. The phototube then receives light only diffusely reflected from the web.

In the center of Fig. 8 it is seen how the phototube receives specular reflected light from a glossy web surface. At the right the light from the light source passes through the web and into the phototube, and is referred to as transmitted light in contra-distinction to reflected light.

Which of the three methods of scanning should be used in a given case depends on local conditions such as the construction of the press which may determine how the scanner may be most easily installed, the kind of web materials being scanned, etc. In most cases one of the three methods will be suitable for handling any of the web materials encountered in commercial and newspaper printing.

When it is desired to install electronic controls it will be advisable to call in one of the reliable manufacturers of such equipment and explain all of the local conditions and then follow his recommendations. Selection of the right equipment calls for specialized technical knowledge but to operate and maintain it is a relatively simple matter which need not worry any up-to-date printer.

PATENTS

For The GRAPHIC ARTS

Covering patents issued Dec. 6, 13, 20 and 27.

All new patents for the Graphic Arts are reported exclusively for *Printing Equipment Engineer* by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. *Printing Equipment Engineer* is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

OPTICAL SYSTEMS

For optical systems for photomechanical typographical composing machines, the systems provide for projecting individual characters or symbols for composition in precise alignment and spacing in a comprehensive range of sizes. Patent 2,725,800 by Maurice Richard Dewhurst, assigned to The Monotype Corp. Ltd.

CONTROL MECHANISM FOR TYPOGRAPHICAL PHOTOCOMPOSING MACHINES

The control mechanism projects symbols in succession from an assembly of symbols, through a lens, and onto a sensitized surface. It can be selectively operated by new combinations of components of existing record-strip signals to perform new or additional functions in an improved manner. Patent 2,725,801 by Maurice Richard Dewhurst, assigned to The Monotype Corp. Ltd.

PHOTOGRAPHIC MEANS AND METHOD FOR COMPOSING TYPE

Small printing firms will find this equipment useful as a complete camera, developing and composing room. Everything needed for composition can be stored in a floor space of

Please pass along copies of *Printing Equipment Engineer* regularly to interested executives in the plant.

about 8 sq. ft. Patent 2,725,802 by Lew C. Snyder.

PHOTOGRAPHIC COMPOSING APPARATUS

The apparatus is of the type in which a compositor operates a keyboard and causes it to deliver copy photographed directly from a stencil of master characters, as fast as the keyboard can be operated, in any of the various fonts of type and in any desired size, with all the lines being justified. Patent 2,725,803 by Cecil L. Tansel.

AUTOMATIC SHUTOFF FOR TYPECASTING MACHINES

This invention provides an automatic shutoff device for use on typecasting machines such as Linotype or Intertype. By shutting off the machine after a predetermined length of time, it prevents excessive machine wear. This device can be quickly and easily mounted on existing machines of the class described. Patent 2,728,821 by William F. Scheffler and Ralph L. Skinner.

Platemaking:

TRANSPARENCIES FOR RECEIVING PRINTING AND METHOD FOR PRODUCING THE SAME

A transparency, for use in photoengraving, can be prepared by applying a transparent elastic coating to a transparent base material, the coating being adapted to receive an inked impression from a printing element. An ink absorbent is also applied to the ink receiving side. Patent 2,726,147 by Heinrich Heichlinger.

LITHOGRAPHIC PLATES AND METHOD OF PREPARING

This process for the manufacture of lithographic plates which retains the theoretical advantages of the electroplating technique and avoids the practical difficulties, i.e., the stencil used will not raise under the action of an electrolyte. Half-tones can be made. Patent 2,726,200 by Harvey T. Holsapple, assigned to Kemart Corporation.

DEVICE FOR WASHING, CLEANING, AND DRYING LITHOGRAPHIC PLATES

For treating plates which have been subjected to a graining operation, the apparatus includes an arrangement which operatively controls the direction of rotation of roller brushes in the apparatus upon manual passage of a plate therebetween. Patent 2,726,414 by Jonas Theodore Lindquist, assigned to Lind-Hog Machine Co.

GRINDING AND POLISHING HEAD

The head is usable selectively for coarse grinding and for polishing, and is of value in the preparation of printing cylinders and plates, for example, rotogravure cylinders. Patent 2,726,492 by Allan Vegell, assigned to Standard Process Corp.

METHOD OF AND APPARATUS FOR PHOTOGRAPHING

For use in production of a three-dimension appearance in a photograph or lithographic print, or in production of plates for use in lithographic printing, back lighting is used in combination with a translucent object having three-dimension characteristics, whereby the camera used photographs direct light rays instead of reflected light rays. Patent 2,726,572 by John J. Braund.

ELECTRONIC MASKING METHOD AND APPARATUS

A selective masking system is provided whereby relative color intensities control automatically the masking formula applied in exposing color separation negatives from which color printing plates are made. Patent 2,727,940 by William West Moe, assigned to Time, Incorporated.

MATRIX FORMING APPARATUS

A forming apparatus for imparting a curved or semi-cylindrical form to a matrix plate for newspapers is adapted to apply radiant heat to the matrix surface when held by a vacuum

(*Continued on Page* 88)

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Mid-Atlantic Conference

Newsprint conservation practices and handling, advances in color printing and mailroom mechanization are topics headlined for the 1956 annual Mid-Atlantic Newspaper Mechanical Conference, to be held at the Lord Baltimore Hotel, Baltimore, Md., March 8-10. According to Conference Director Theodore A. Serrill, general manager of the Pennsylvania Newspaper Publishers' Assoc., the three day conference is expected to attract delegates from newspapers in Pennsylvania, New Jersey, Maryland, West Virginia, Virginia, New York and the District of Columbia. Conference is under the co-chairmanship of Harold C. Berg, mechanical superintendent, Wilmington (Del.) *New-Journal*, and Neal E. Dyer, business manager and mechanical superintendent, Camden (N. J.) *Courier-Post*. Some of the features of the conference are a Press and Stereotype Session with a film on newsprint handling, reports on Publication During Emergency, a Photoengraving Session and a talk on R.o.p. Color Simplified, by Thomas S. Curtis, president, Curtis Laboratories, Inc. A Mailroom Session and Composing Room Session are also planned. On Friday evening the annual Conference banquet will be held.

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Type melting at the Cedar Rapids (Iowa) Gazette is cheaper, faster and cleaner since the newspaper installed 3 Kemp Melting Pots.

The pot sizes are 7 tons, 7,000 pounds and 3,200 pounds. They are kept full at all times, with temperatures automatically controlled between 575 and 630°F. To save fuel, all 3 pots can operate at once on one Kemp Carburetor.

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According to Mr. Tom Caldwell, stereotype superintendent, "We've been able to expedite production and processing at a higher rate than before. We especially like the temperature uniformity and quick response of the immersion burners. Good insulation makes working conditions more comfortable." There has been no pot breakage or down-time on any of these Kemp units since installation in 1951!

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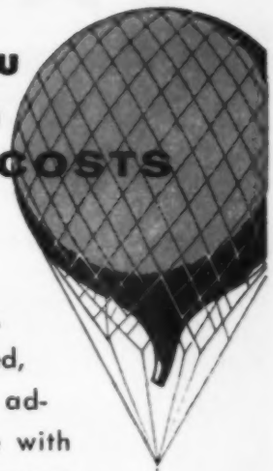

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forming device. Moisture is vented to the outside of cabinet to speed the forming operation. Patent 2,728,147 by Arnold L. Inshaug.

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Feeding, Folding, Delivery:

SHEET FEEDING MECHANISMS

An improved sheet feeding mechanism for feeding a timed succession of sheets onto a feed board comprises a front lay for effecting registration of the front edges of sheets and suction grippers which hold and raise the sheets and move them forward. Patent 2,726,865 by Headley Townsend Backhouse.

CROSS-ASSOCIATING FOLDERS WITH SPACEABLE NIPPING ROLLERS

A new gear drive arrangement for a cross-associating folder permits a maximum number of web leads in conjunction with balloon formers. Patent 2,727,739 by Charles A. Harless, Emory W. Worthington, and Andrew R. Hegeman, assigned to R. Hoe & Co., Inc.

MECHANISM FOR CONVEYING AND COUNTING FLAT, FLEXIBLE ARTICLES DELIVERED IN A STREAM

Newspapers being conveyed in flat, overlapped or spaced relation, with folded edges forward, are counted as the forward folded edges are positively flipped through a light beam impinging on a photo-electric device. Patent 2,725,972 by Frederic E. Howdle, assigned to Cutler-Hammer, Inc.

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Printing Presses:

SHEET REGISTERING MECHANISM

Mis-registered sheets can be stripped from a registering cylinder of the type covered by patent 2,231,914. The stripper rollers are swingable into and out of operative relation to the cylinder which directs the mis-registered sheet away from the running parts of the machine. Patent 2,726,863 by Alexander J. Albrecht, assigned to R. Hoe and Co., Inc.

CONTROL AND SIGNAL MEANS FOR MOTOR DRIVEN MACHINES

This controller provides for both an audible and visual signal before inching, running, and threading operations of a printing press and at the same time avoids any waste of time in speeding up the press for faster operations. Patent 2,727,227 by Edward Q. Mead, assigned to Cutler-Hammer, Inc.

INKING ROLLERS

The arrangement is such that uniform distribution applied to type is unaffected by the progressive decrease of the ink supply. An adjustment is provided for varying the contact pressure between the ink fountain supply roller and the type. Patent 2,727,463 by Andrew J. Alessi, Jr., assigned to Adolph Gottscho, Inc.

BLANKETING OF PRINTING PRESS IMPRESSION CYLINDERS

The flap used for attaching blankets or padding to cylinders of printing presses is preferably made of metal rather than canvas and carries a plurality of sets of fasteners adapted to receive hinge pins for uniting the flap to a plurality of blankets. Patent 2,727,463 by John W. Foster, Jr., assigned to Tingue, Brown & Co.

FOUNTAIN ROLLER DRIVE

An oscillating rotary drive, such as those used with ratchet driven ink fountain rollers,

PATENT SEARCHES
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is adjustable while the machine is running by means of a novel linkage system and without the use of slidable parts. Patent 2,728,292 by Charles A. Harless, Emory W. Worthington and Albert T. Zurick, assigned to R. Hoe & Co., Inc.

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Binding, Cutting, Perforating:

MECHANISMS FOR APPLYING ROD CEMENT

The mechanisms are applicable to a book tipping machine by means of which end signatures to be used in making up a book are carried one after another past the cement applying disk and then into association with liners such as are frequently interposed between the book and its cover. Patent 2,726,629 by Hans C. Paulsen, assigned to B. B. Chemical Co.

•

Miscellaneous:

PRINTING TABLE

For printing by means of flat stencils and for rotary film printing machines, this table consists of a rectangular frame and a resilient stretched metallic tape secured to two opposite sides of the frame and extending over its entire length. The tape serves as a printing support. Patent 2,728,294 by Erich Kalin, assigned to Stoffel and Co.

Literature

(Continued from Page 40)

For a copy of any of these bulletins, please mention PEE No. 83L in your request.

AUTOMATIC HALFTONE ENGRAVING

The Fairchild Scan-A-Sizer is described in a 12 page bulletin prepared by Fairchild Graphic Equipment, Inc. All halftone illustrations in the brochure are printed from engravings produced on the Fairchild Scan-A-Sizer. The Scan-A-Sizer is a Fairchild development in automatic-electronic equipment for halftone engraving. Specifications of the Scan-A-Sizer are given along with operational data. For a copy, please mention PEE No. 84L in your request.

COVERED CREEPER

A one page printed bulletin is being offered by Midwest Publishers Supply Co. with a small swatch of a stereotype molding creeper. The creeper is covered with Nylon on both sides of the durable rubber center. The rubber prevents stretch of mat in stereotype molding. Creeper is approx. 0.044 in. thick and is available in sizes 21 in. by 25 in. and 22 in. by 26 in. Larger sizes on request. For a copy, please mention PEE No. 107L in your request.

ELECTRONIC ENGRAVER

A 20 page three color booklet descriptive of Consolidated Engrav-a-plate machines has been published by Consolidated Intl. Equipment and Supply Co. Both the Consolidated Engrav-a-plate for producing halftones on Nolar plastics mechanically, and the Consolidated Engrav-a-plate machine designed to produce line engravings, are described. On the machine can be produced 65, 80 and 120 line screens and illustrations of each are given in the booklet. Also included in the booklet are the steps involved in making an Engrav-a-plate. For a copy, please mention PEE No. 105L in your request.

XEROGRAPHIC COPYING EQUIPMENT

A six page brochure of interest to present users of Xerographic copying equipment has been prepared by The Haloid Company. In the brochure are illustrated and described some of the developments since Xerography

5 OUT OF 30

Winona Daily News
Winona, Minnesota

Augsburg Publishing House
Minneapolis, Minnesota

NOT ILLUSTRATED:
Peoria Journal Star
Peoria, Illinois
Rochester Post Bulletin
Rochester, Minnesota

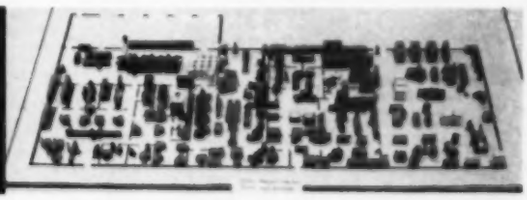
Gordon Printing Company
Davenport, Iowa

Planning by
GRAPHIC ARTS
INDUSTRY, INC.

DESIGN . . . LAYOUTS . . . SUPERVISION

FIVE out of THIRTY outstanding new printing and publishing plants featured in the 1955 Printing Equipment Engineer Plant Improvement issue utilized the plant layout consulting facilities of Graphic Arts Industry, Inc. This wide preference in the six-state area we serve is vivid testimony to the many valued features of our Plant Planning Service.

SEE IT BEFORE YOU BUILD



Every new project or plant improvement is carefully forecast in an actual scale model reproduction. This eliminates many costly errors and pitfalls in the final accomplishment.

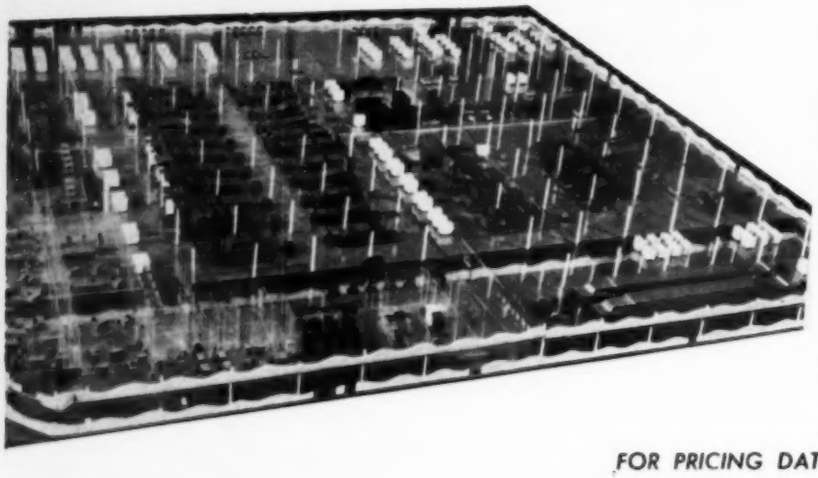
Request a detailed brochure describing our complete *personalized* management-consultant services to printers and publishers.

THAT COMMERCE MAY BE SERVED
GA
SINCE 1877

GRAPHIC ARTS
INDUSTRY, INC.
Paul J. Ocken, General Manager
1104 Currie Avenue Minneapolis 3, Minnesota
Telephone FEderal 5-1171

QUOTE FROM A LETTER ON "VISUAL"

● "It has been our experience that drawings and template layouts alone give a representation of facilities that is unsatisfactory in bringing clarity to all the people who must collaborate on a layout. In contrast, we have found that scale models in three dimensions give a picture that is clear enough so that planning can be done with operating people understanding how the layout will look and how it is going to work. We have found that these models give us a means of uncovering valuable ideas that otherwise would remain hazy notions in the minds of operating people.



"You may be sure that we consider the models an excellent investment. Their initial cost was paid off quickly by the understanding they have brought to our layout problems, and we still have the models for use in solving future layout problems."

THE ABOVE QUOTATION IS REPRINTED EXACTLY AS WRITTEN BY MR. G. E. KIRKPATRICK, EXECUTIVE VICE PRESIDENT, THE A. L. GARBER COMPANY, ASHLAND, OHIO.

FOR PRICING DATA AND LITERATURE PLEASE WRITE:

"VISUAL" PLANT LAYOUTS INC. Dept. PEE-36

PENNSYLVANIA AVENUE AT RIVER, OAKMONT, ALLEGHENY COUNTY, PA.

was first announced in 1950. Included is a graphic cost breakdown, comparing the years 1952 and 1955. Brochure is printed in two colors. For a copy, please mention PEE No. 97L in your request.

Pressroom

GRAVURE PRINTING

An eight page color illustrated reprint descriptive of rotogravure equipment used in a restyling program is now offered by Champlain Co. In the reprint is told how an entire line of match containers was redesigned in keeping with contemporary art trends. The replacement of flat-bed and rotary presses with rotogravure equipment are discussed along with the advantages of gravure printing. Press operation and the finished product are pictured in 10 illustrations. For a copy, please mention PEE No. 85L in your request.

MIEHLE LITHOPRINT

The Miehle 17 Lithoprint offset press is described and pictured in a new 8½ in. by 11 in., three color, 12 page booklet published by Miehle Printing Press and Mfg. Co. Operating features, such as feeding and registering, sheet thickness gauge, simplified control panel, and rapid plate mounting system, are pictured. Why and how the printer can compete for new markets by using this machine is explained in detail. Also discussed is how the Lithoprint can accommodate albumin or deep etch plates, sensitized metal or sensitized paper plates or direct image paper plates. Please mention PEE No. 89L in your request.

STATIC ELIMINATOR

The Portland Company has issued Bulletin No. 73-A, a four page folder descriptive of the various types of Chapman Static Eliminators and their application on presses, feeders, folders, etc. The bulletin is well illustrated and in it is contained a partial list of plants equipped with Chapman Static Eliminators. Static bars for Miehle, Miller and Harris presses are shown as well at bars for Christensen Bronzing Machine and a Dexter WWC Folder. For a copy, please mention PEE No. 86L in your request.

PLATE ADJUSTMENT

A two page insert is used to describe the features of plate adjustment on the Miller-M.A.N. offset presses, released by Miller Printing Machinery Co. Please mention PEE No. 87L in your request for a copy.

KNIFE-TYPE FOLDER

A two color four page brochure, in which is covered the Model 191-A Book and Job Folder, is being offered by Dexter Folder Co. Folder is equipped with a Cross continuous feeder for production at rated speeds up to 3600 folds per hour. A reference chart in the brochure is used to show the variety of signature styles and sizes that can be folded and a diagram of the folding rollers indicates how a wide range of papers is folded. Also included is a floor plan of the Model 191-A which includes overall dimensions. Data also are included on electrical equipment. For a copy, please mention PEE No. 88L in your request.

WEB BREAK PROTECTION

A three page publication, descriptive of the Korthe Engineering Co.'s Cooksey System, is available. In the Cooksey System, for modern high speed newspaper presses, is incorporated detectors, trolleys, severing device and stop circuit which prevents wrap ups and cleans the impressions of paper when a web break occurs. A halftone and diagrams illustrate the equipment. Data on the components of the Cooksey System are included. For a copy, please mention PEE No. 90L in your request.

Bindery

DIE CUTTING MACHINE

A leaflet, *Die Cutting is Profitable*, descriptive of the PMC Semi Automatic Die Cutting Machine, has been released by The Printing Machinery Co. Uses of the machine are listed along with specifications. Fancy labels and rounded corners on booklets are two of the uses of the die cutting machine. For a copy of the three color leaflet, please mention PEE No. 91L in your request.

PLASTIC AND LOOSE LEAF BINDING

A booklet, *Manual of Modern Plastic and Loose Leaf Binding*, has been made available by General Binding Corp. The GBC Binding System is described and the 1001 applications claimed by manufacturer are explained. The GBC System incorporates the GBC Model 12-D punching and binding machine to bind anything from 1 to 500 pages. For a copy, please mention PEE No. 92L in your request.

Miscellaneous

BUFFS

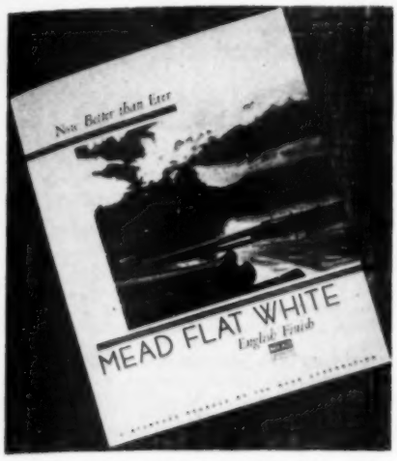
An illustrated 12 page buletin covering the full range of H-VW-M buffs is now offered by Hanson-Van Winkle-Munning Co. The bulletin is descriptive and illustrative of the three types of buffs used in cutting down and coloring: pieced buffs for lighter work, full-disc buffs for medium to light duty, and Ruff-L-Buffs for heavy duty. The different methods of sewing buffs are explained and illustrated. Such information as grades of cloth, ruffle patterns, diameter sizes, hole sizes and flange designs is given in detail. For a copy, please mention PEE No. 93L in your request.

GEARMOTORS AND MOTOGEARS

Link-Belt Co.'s new line of Gearmotors and Motogears is described in its 28 page Book No. 2447, which includes selection data together with features of construction, load classifications, dimension tables, over-hung load ratings and mounting assemblies. Also included are descriptions and illustrations of Link-Belt backstops, slide rails and couplings. Both the Gearmotors and Motogears are in keeping with new NEMA motor sizes. For a copy, please mention PEE No. 95L in your request.

ENGLISH FINISH PAPER

The bright-white color and qualities of Mead Papers, Inc. Flat White English Finish are demonstrated in a six page folder. Printed two colors, letterpress, the bulletin is folded



so that an identical halftone illustration printed on wire and felt side of the paper may be compared. A table showing stock sizes and weights available is also included. For a copy, please mention PEE No. 94L in your request.

AUTOMATIC LUBRICATORS

A four page, two color brochure descriptive of high pressure automatic lubricators has been released by Bijur Lubricating Corp. The Type A lubricators are used to deliver metered quantities of oil on adjustable time cycles. Two tables enumerate lubricators available for five basic drive speeds. The 20 standard Type A lubricators are listed. Reservoirs, oil filters and single feed line distribution system are also described. Lubricators and detail parts are illustrated and drawings are used to show the internal mechanism and oil feed principles involved. For a copy, please mention PEE No. 96L in your request.

PAPER HANDLING EQUIPMENT

Two bulletins descriptive of paper handling equipment have been released by Hyster Company. In a four page bulletin, Hyster QN-20 Lift Trucks are illustrated and described. Complete specifications of three 1000 lb. to 2000 lb. capacity models are given. In the one page leaflet, the Hyster Paper Roll Grab, both revolving and non-revolving, is described and illustrated. Specifications for the six models are included. For a copy, please mention PEE No. 98L in your request.

SWITCHES AND CLUTCH CONTROL

Uses Unlimited, a four page bulletin, has been published by Micro Switch, a division of Minneapolis-Honeywell Regulator Co. In the bulletin is covered push-button actuators, counter switches and trip control for two hand clutch control of machines. The bulletin is illustrated and specifications are given for the variety of switches. For a copy, please mention PEE No. 99L in your request.

BOND PAPER FOLDER

You, too, can be an impresario, is the title on Champion Paper and Fibre Co.'s new Ariel Bond folder. The two color piece is designed to call attention to the grade's blue-white shade. The layout offers suggestions for various uses, while the copy points out the sheet's versatility and adaptability. The folder is produced by offset. For a copy, please mention PEE No. 101L in your request.

STEEL STRAPPING

Gerrard Steel Strapping Div., United States Steel Corp. has issued 40 page booklet called *Blue Book of Packaging*. Booklet is descriptive of strapping machines and accessories, containers for steel strapping, and dispensers. Steel strapping technical data are included on two pages. For a copy of the two color booklet, please mention PEE No. 102L in your request.

LATHES AND MILLING MACHINES

An 84 page 50th Anniversary Catalog of machine tools and motors has been published by South Bend Lathe Works. Included are South Bend lathes, milling machines, milling attachments and motors and controls. Complete specifications and illustrations are included. Two pages are devoted to diagrams of floor space required for South Bend Machine Tools. For a copy, please mention PEE No. 103L in your request.

BALING SYSTEM

The Cyclomatic Power Baling System is illustrated and described in an eight page double fold bulletin by Balemaster Division, East Chicago Machine Tool Corp. The Cyclomatic conveys, hogs, and bales continuously up to 4 T. an hour. In the three color bulletin is a large illustration of the Cyclomatic. For a copy, please mention PEE No. 100L in your request.

NEW ROLLER PLANT

Ideal Roller & Mfg. Co.'s new Chamblee, Ga., roller factory is illustrated and described in a 20-page booklet. Background of the Southern division sales staff and officers is given. One section is devoted to roller processing in the plant beginning at receipt from the customer to final inspection and shipping. Architectural details of the Chamblee plant are given. For a copy, please mention PEE No. 106L in your request.

SHERWOOD

Gerald L. Sherwood was appointed Eastern sales and technical representative of Unitronics, Incorporated. Sherwood, a chemical engineer, was formerly connected with the Spaulding Moss Co. and the Direct Reproduction Corp.

COMPOSITORS! PLATEMAKERS!
Add Savings and Profits with these MORRISON Modern Time-Savers!

MORRISON SAW TRIMMERS

Morrison Model 3-A

A high speed, highly versatile saw trimmer designed for great strength and durability. Features include: Behind-the-Gauge Workholder, 73-Pica Gauge, 135-Pica Swing-Out Extension Gauge, Miter and Line-Up Gauge, Right and Left Hand Miter Vise, Saw Grinding Attachment with Universal Saw Blade, Emery Wheels, Trimmer Grinder, Waste Receptacle, Motor.

Morrison Model 45

WITH FAST PISTOL-GRIP SAW ADJUSTMENT

Designed for medium-sized plant, with many features of Model 3-A. Capable of high speed production, extreme accuracy and versatility to match the needs of most composing rooms.

MORRISON Special SAW TRIMMERS

BENCH MODEL CABINET MODEL

Compact, low-priced, capable of amazing variety of work, designed for smaller plants where space is limited. Have many features of higher priced models, with many parts and attachments interchangeable.

Morrison Slug Strippers

Simplify plate and type corrections without mortising

CABINET MODEL BENCH MODEL

Valuable time-savers in any composing room. Cut Linotype, Intertype, Ludlow or APL Slugs, or single type, to any height required, from 0.065" to 0.109" or 0.152". Handle slugs ranging from 1 to 72 points, and up to 50 picas in length. Simple and safe to operate.

Morrison Router and Type High Planer

with Exclusive Micrometer Height Gauge

Double-duty machine, providing accuracy and speed in routing, plate corrections, type-high planing for composing rooms, engraving plants, electrotype foundries.

Morrison Plate Beveler

Important for engraving plants, the Morrison Plate Beveler cuts perfect burr-free shoulders on any square engraving in seconds! Safe, works from *edge* of plate, not top; no possible contact between cutters and fingers, no flying chips. Soft leather protects plate face.

Prove MORRISON Savings in your plant! Write or wire for prices and details.

OTHER MORRISON EQUIPMENT:
Strip Material Cabinets, Waste Receptacles, Universal Saw Blades, Router Bits, Jig Saw Blades.

THE *Morrison* COMPANY
PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY
125 W. MELVINA STREET • MILWAUKEE 13, WIS.

Precision · Production · Profits . . .

PMC Sterling Toggle Base and Hook System

permits you to improve quality, increase production and decrease operating costs.

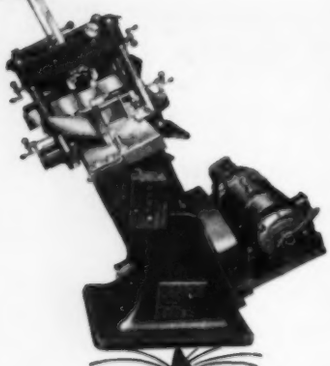
Plates are quickly positioned on rigid, precision made PMC Sterling Toggle Base. They are accurately registered and securely held by PMC Sterling Toggle Hooks.

Time required for lock-up, make-ready and register is cut substantially, resulting in less idle press time and more profitable operation.

PMC Warnock Rotary Hook System

gives you positive, precision plate mounting on *any* rotary letterpress.

Assures speedy, accurate placement of plates—measured movement of hooks for hairline register—ability to hold extremely narrow margins and irregularly shaped plates.



PMC Die Cutting Machine

handles up to 300,000 pieces per hour. It dies out labels, or cuts round corners and trims three sides in one speedy operation.

Write for additional information.

P M C

THE PRINTING MACHINERY COMPANY

436 Commercial Square
Cincinnati 2, Ohio

New book *Color By Overprinting* enables printers to increase color work.

COLOR by Overprinting

By Donald E. Cooke

A guidebook in the art and printing techniques employing transparent inks in multiple combinations enables printers to get their share of increased color printing. It is a definitive work about solid-color overprinting with transparent inks and is one of the most complete texts ever written about multicolor line reproduction and pre-separated artwork.

The method is implemented with standard printing plates on standard presses by letterpress, offset, gravure and silk screen with your present equipment.

Color By Overprinting consists of 268 pages, sizes 8½ in. by 11 in.; 44 pages of illustrations; 165 pages of color charts with keyed numbers of inks employed to secure colors from 11 basic colors and black. Substantially hard bound. The text is fully annotated for artists, printers, engravers, art directors and editors in the book, magazine, packaging and Graphic Arts fields generally.

Price, **$25.25** per copy postpaid.
(Please send remittance with order.)

Printing Equipment Engineer
1276 West Third St. Cleveland 13, Ohio

Operation of the Offset Press

By Theodore F. Makarius

This 254 page book has been written especially for the man who must makeready and operate the *offset* printing press.

In this 254 page book are 25 chapters and 57 pages of Case Histories for overcoming specific troubles. Some of the chapters deal with: Setting the Pressure, Inking Rollers, Dampeners, Ink Fountains, Mounting Plate and Blanket, Split Fountain Printing, Drying Problems, Register Troubles and others. Included is a six page Ink Problem Reference Chart.

Color Charts are included. One of these demonstrates difference in cleanliness of color when mixing two inks which complement each other. Another color chart has been prepared to show the result of mixing different percentages of components.

Size 5¼ in. by 7⅞ in., 254 pages. 19 illustrations. Bound in gold stamped semi-flexible cover.

Price, per copy, $10.25 postpaid
(Please send remittance with order.)

Printing Equipment Engineer
1276 West Third St. Cleveland 13, Ohio

Hopes 12 Lines per Min. Machine Soon Won't Be Called a Freak

At the Sunday morning Machinists' meeting, Great Lakes Conference President LeRoy Schulz extended some opening comments. He stated the objective in holding the Great Lakes Conference was to make it possible for the mechanical executive to secure answers to production and mechanical problems from a group. In many instances, some problems defy solution when attempted on a "lone wolf" basis.

Cecil Sparling, chief machinist, the Milwaukee (Wis.) *Journal*, served as chairman of the meeting. He was assisted by Co-chairman George Bolton, chief machinist of the South Bend (Ind.) *Tribune*.

The first speaker was George Bolton, who discussed *Teletypesetter Operation at the South Bend Tribune*.

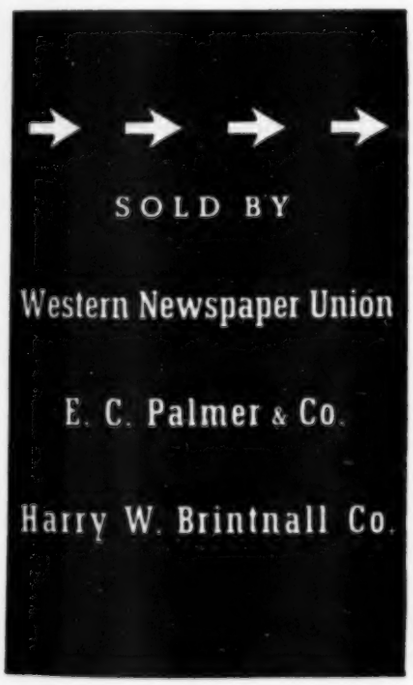
Bolton reported: "We are still traveling at 12 lines a minute on our TTS operated linecomposing machines. We are looking into the future when the 12-line-a-minute machine will no longer be a freak. I heard a man say recently that someone better find a short cut in producing a newspaper. Man's capacity is limited, so I think automated machinery is going to *have* to be the answer. Since the machinist is charged with maintenance of the composing room machinery, he should have a finger in improving newspaper equipment technology.

The speaker, by means of slides, illustrated and described a number of devices which had been developed in the *Tribune* composing room to facilitate increased production on TTS operated linecomposing machines.

He continued: "There are days when the lineage on the TTS operated machines will average almost 3000 lines per machine. We ran one machine up to over 4000 lines just recently. Actually on this machine we finished the day with 4020. This is the greatest number of lines we have secured from any one machine so far. In our battery the TTS machines will total from 19,000 lines up per day on seven TTS machines. Five of these machines run at 12 lines per min. and two at 10 lines per min. Our greatest production has been 22,983 lines, or 3276 lines per machine, in a 7¾ hr. workday."

International Exhibition in Switzerland—An international exhibition and trade fair for the printing and allied industries is to be held at Lausanne, Switzerland, in June 1957. Manufacturers of all nations will exhibit printing machinery, equipment and materials. Printers, blockmakers, engravers, designers and advertising artists will present their most recent work. The fair will be held at the Comptoir Suisse.

Convente Appointed — Photogravure and Color Co. recently announced the appointment of Peter A. Convente as executive vice president in charge of a program of expansion and improvement. George T. Bailey will continue as a director.



U
to the printer who hasn't time to read this ad!
CHALLENGE
Hi-speed quoins give you time!
The Challenge Hi-Speed Quoin puts time on your side . . . ends needless "shuffling about" around the form, hunting for loose parts, inserting reglets, correcting work-ups, etc.
With a Challenge Hi-Speed, one master quoin and one key simplifies and speeds the whole lock-up operation . . . a few seconds do the work of many minutes.
Expansion is direct, uniform, and powerful — with no time out for waste motion. Made in seven sizes from 3 to 12 inches. Write for complete specifications.
Challenge
TRADE-MARK ®
THE CHALLENGE MACHINERY COMPANY
Office, Factories and Show Room: Grand Haven, Mich.
Over 50 Years in Service of the Graphic Arts
DEALERS IN ALL PRINCIPAL CITIES
8045
PROOF PRESSES
PAPER DRILLS
PAPER CUTTERS
HI-SPEED QUOINS
ROOM-FURNITURE
IMPOSING SURFACES

Bad Boy of Newspaper Industry Still is the National Ad Mat

The bad boy of the newspaper printing industry, after many years, still is the national advertising color stereotype mat received from the advertising agency or from the commercial mat supply house. The subject was again discussed at the Great Lakes Mechanical Conference, Milwaukee, Jan. 30. During the discussion by panel members and stereotype executives on the floor, it seems that stereotype executives generally feel frustrated in attempting to get good reproduction. One of the principal causes for complaint is that register marks are not molded into the mat for color reproduction. This was mentioned specifically by Lloyd Wright of Fort Wayne (Ind.) Newspapers, Inc.

George Fuller, stereotype superintendent, Cleveland *Press*, said there seems to be a distinct lack of knowledge on the part of agencies and mat suppliers regarding the requirements for stereotype mats to be used in newspapers. He said that occasionally he receives advertising mats bearing the label: "Do not flat cast." Like Lloyd Wright, he complained of the absence of register marks in color mats. Apparently, some small advertising agencies and commercial stereotype mat supply houses do not observe ordinary stereotype mat reproduction requirements.

Dick Lewis, manager of the ANPA Mechanical Dept. explained that a thorough specification list had been published long ago. These bulletins had been carefully prepared and distributed to ANPA member papers, advertising agencies and to commercial mat supply houses, including photoengravers. As the discussion progressed it seemed to become complex. The main point of contention among stereotype executives was that register marks are not supplied either in original photoengravings or in the mats received in the newspaper plant.

Fuller explained that in spite of publication of the AAAA-ANPA specifications no results had been obtained with respect to complying with the specifications by agencies, engravers and commercial mat houses. ANPA Mechanical Dept. Manager Richard E. Lewis remarked that commercial mat houses should be made acquainted with the AAAA-ANPA specifications and all other reports as well as the agencies and engravers.

E. E. Klostermann, Lake Shore Electrotype Div., moderator of the meeting, interposed that if photoengravers do not put register marks in the originals received at Lake Shore, they are put in at Lake Shore before sending mats and/or electros to newspapers. He also explained that considerable continuous educational work has and is being done along these lines—and it's a long time project.

Dave Rusch of Merchant Matrix Cut Syndicate, admitted talking informally to newspaper stereotype executives that they had troubles with these mats. He also said his company experienced troubles in furnishing mats with necessary requirements. He described the method of creating copy and passing it along to the advertising agency. Usually, the trouble is that there isn't time enough allowed in which to do a good job. If there is a small error in the work it is hoped that somehow it will be caught later because the deadline must be kept—the mats must go out. "We never hear about the good jobs we do," he said, "but we always hear about the bad ones." He concluded his remarks by stating that after all the educational effort during a painful period, there is only one line of pursuit to be undertaken—that of cooperation, by advertising agency, engraver, matmaker and by newspaper mechanical executives. He said: "We have got to find ways to do a better job," he concluded, "and we want to ask the cooperation of you fellows."

Golden Faris, production manager, Indianapolis (Ind.) Newspapers, Inc., suggested that the Great Lakes Conference take positive action by ap-

This you should know . . .

Burgess mats shrink less lengthwise for a given width shrinkage. Why ask for trouble with advertising lineage. Help the advertising department—use Burgess Mats.

BURGESS CELLULOSE COMPANY
Manufacturers and Distributors of
Burgess Chrome and Tone-Tex Mats
FREEPORT, ILLINOIS

A Laboratory Product
BURGESS Chrome MATS

STATIC

. . . *can* be eliminated . . . effectively, safely, inexpensively. The SIMCO "Midget" is *guaranteed* to be the surest means of static control available . . . for *all* printing machinery, under *all* operating conditions. Write today for information and prices of Simco's complete line, including the new "shockless" bars which are perfectly safe to use even in inflammable atmospheres.

the SIMCO company
920 Walnut Street, Lansdale, Pa.

pointing a committee to follow through on requirements not only for color mat reproduction but also for black and white mats as well.

Someone in the audience at this juncture arose to state he thinks newspapers are at fault in not furnishing specifications so they can be printed in *Standard Rate and Data* service.

Harry Eybers, production manager, Washington (D. C.) *Post* and *Times-Herald,* spoke forcefully on the subject of unsatisfactory mats furnished by the agencies and mat suppliers. "We come to these conferences each year and talk about unsatisfactory mat reproduction, but don't get anywhere with our complaints." He wanted to know: "Why all the mystery?"

Wilson D. Nash, stereotype superintendent, Indianapolis (Ind.) *Times,* remarked: "If register marks are provided, in some cases they don't mean a thing. When holes are drilled they don't fit. I don't trust them." Some additional comment was made that instead of using the recommended register mark consisting of a cross with ring center, the plain cross mark is used. In such case it is difficult for the stereotyper to center the drill exactly.

There was some complaint with respect to sending sufficient proofs of advertisements, especially color proofs. Moderator Klostermann stated it was the practice of Lake Shore to send as many proofs as are desired, or as many as the advertising agency is willing to furnish. He explained the latter part of the statement by saying that color proofs can be quite expensive.

Registering Color Plates In Smaller Plant

Leonard Clemens, mechanical superintendent, Elkhart (Ind.) *Truth,* discussed his method of registering stereotype shell casts and mats for color plate making.

"When making shell casts for color platemaking," he explained, "we leave as much dead metal around the plates as possible. After shaving, we lay them side by side on a table. Since we work on the black plate first, we lay it at the left. We use a long line gauge for a straightedge and scribe a line on the right side of the plate where the trim is to occur. Taking a pair of dividers and picking out a key point such as a register mark near the top of the advertisement, we place one divider point upon it and extend the other point to the scribed line on the edge of the plate. Then, setting one point of the dividers on the color key point,

Brackett Resigns—PIA officers recently met to consider the request of James R. Brackett, general manager of Printing Industry of America, Inc., for an extended leave of absence or resignation and his continuation on a consulting basis. Brackett's health has been failing and his doctor recommended separation from all business connections for a period of time. It was decided by the officers to accept his resignation and have him available on a consulting basis. This decision was authorized by the PIA Executive Committee. Assistant Gen. Mgr. Bernard J. Taymans was designated acting general manager until the officers submit recommendations to the Executive Committee for the appointment of a new general manager. Brackett came with PIA as its first general manager in 1945 and has been with PIA through its initial organization and program development.

James R. Brackett Bernard J. Taymans

we scribe a light line at the edge of the color plate. Repeating the procedure at the bottom of the advertisement we scribe a line down the side of the color plate along these two marks, again using the line gauge as a straightedge.

"We now carefully trim the plates along these lines. Then, laying the black plate directly on the color plate, we square up both plates to measure by trimming them with the gauge on the saw. Now we have a pair of plates the same size and in register with one another. Fastening the plates to the base is done in the composing room. The ad man builds a border around the black plate with a hairline rule on 6 pt. body. These lines are routed off the stereotype plate. The time consumed in composing room makeup to secure register is the length of time required to lift out the black plate and replace it with a color plate."

Clemens explained that the hair line rules are also used for final check of the trim in the mat. To do this, he said: "Trim only the head of the mat before putting it in the Sta-Hi Former. After the mat has been removed from the Former, use a trammel bar for checking. Place one slightly blunted point in the rule depression at the top of the ad of the black plate mat. Run the other trammel bar point out to and in register with the trim line on the edge of the mat and lock the point securely. Then run down the length of the advertisement. If the page is made up properly the trim line and the rule will be parallel. If not, scribe another line into the mat and use it for trim. With the same setting, give the same treatment to the color mat. Now, move the point over to the rule on the other side of the ad and repeat the procedure. Very often, there will be two lines on the color mat. Just split the difference and trim exactly between the two. This will compensate for any uncontrolled shrinkage."

Prince Reports on Mat Pak

Roy Prince, technical research director, ANPA Research Institute, Easton, Pa. made a progress report on the Mat Pak packless stereotype mat research project. He said: "At this moment, 12 newspapers have either modified, or are modifying, their stereotype scorching and casting equipment to use Mat Pak. This is an expanded field test to observe the production capabilities of Mat Pak with various shrinkages up to 1 13/16 in. on a 15 9/16 in. form."

He explained: "We feel we must closely watch these tests and hence must limit the number of papers wishing to cooperate. We have included as many newspapers as we can study at one time."

Other comments made by Prince during his address were: "We can tell you how the Mat Pak material will be supplied to you when it is marketable at no more than 28½c per sheet, and that wide acceptance will reduce the cost to you.

M.A.N. Stereotype Casting Equipment

In an extended address, Charles Fritschi, of R. Hoe & Co., through the use of a number of slides, explained in detail construction and operation of the automatic and semi-automatic stereotype plate casting machines manufactured by M.A.N., Augsburg, Western Germany.

here's how Rouse REDUCES YOUR TIME COSTS

CUT A FULL GALLEY OF MIXED MEASURES SLUGS IN ONLY 35 SECONDS

Rouse BAND SAW

No more gauge setting! No more reclamping or measuring! That's why the Rouse Band Saw offers you by far the most economical way to accurately cut slug lines to different measures in the shortest possible time. No other machine nor method can even come close to this achievement.

If you operate one or more linecasting machines on variable measure composition, the Rouse Band Saw will do the work of hours in minutes. Expensive time saved will be unusually great in work requiring frequent changes in line measures, such as ad work, catalog runaround work, etc.

NEW ROUSE CATALOG

Write for your copy TODAY!

CUT 1000-1200 ACCURATE MITERS IN ONLY 1 HOUR

Rouse POWER MITERER

If you need miters in either small or large quantities, no other machine nor method can turn out anywhere near as many perfect joining miters from strip material. That's how the Rouse Power Miterer can slash your time costs by doing work in minutes that now takes hours. It quickly pays for itself in expensive time saved.

From the smallest job shop up to the largest plant, only Rouse makes a Power Miterer for every type of use. Can be bought as a bench model or with any other equipment you wish.

Virtually every printing plant in the world uses one or more Rouse Time-Saving Products for Printers

H. B. ROUSE & COMPANY
2214 N. WAYNE AVENUE, CHICAGO 14, ILLINOIS

MITERING MACHINES
LEAD and RULE CUTTERS
COMPOSING STICKS
TYPE GAUGES
SLUG CLIPPERS
BAND SAWS

ROUSE PRODUCTS—THE STANDARD OF THE WORLD FOR 50 YEARS

SOLD BY

Western Newspaper Union

E. C. Palmer & Co.

Harry W. Brintnall Co.

Page Costs, Photocomposition and Personnel at Great Lakes

One of the outstanding papers delivered at the Great Lakes Mechanical Conference, Milwaukee, Wis., Jan. 29-31 was delivered by Production Mgr. Harry Eybers of the Washington (D. C.) *Post* and *Times-Herald*. Eybers spoke on *Is Page Cost Comparable Among Newspapers?* His address appears elsewhere in this issue of *Printing Equipment Engineer*.

At this session, George P. Kunz, production manager of the South Bend (Ind.) *Tribune* served as chairman with Co-chairman Deo A. Padgett, composing room superintendent of the Cleveland *Plain Dealer*.

After the conclusion of Eybers' address, Franklin Schurz, editor and publisher of the South Bend (Ind.) *Tribune*, made extended remarks. He said that an ANPA committee is now engaged in mailing a questionnaire to member papers regarding composing room operation. When the returns have been analyzed the committee hopes to find out where money now going down the drain can be saved.

The next speaker was Ralph H. Halversen, Supervisor, Teletypesetter Methods Planning, Teletypesetter Corporation. His subject was *Teletypesetter's Automatic Allotter System and Proposed TTS Selector*. His discussion was illustrated with slides. The system is used to keep a steady flow of punched tape going to each linecomposing machine in a plant to eliminate idle time. As a machine becomes idle, a reperforator is turned on automatically.

People Can Be a Plus Factor

Considerable attention has been paid to the subject of personnel and human relations in the mechanical departments of newspaper plants within the last few years. Personnel relations in the plant have been deemed of enough importance that larger papers have engaged the services of full-time personnel relations directors. Even some of the medium size papers have competent people engaged in that capacity, while some of the smaller papers have delegated a management executive to make employees feel they are a part of the firm. Warren G. Wheeler, jr., personnel director of the South Bend (Ind.) *Tribune*, delivered an exceedingly worthwhile address entitled *People Can Be a Plus Factor*. Wheeler divided his address into four sections: (1) Apprentice selection; (2) Developing better work habits and attitudes among present employees; (3) Improving interdepartmental relationships, and (4) Picking better foremen and supervisors. Wheeler's address will appear in early issues of *Printing Equipment Engineer*.

Advertising Composition by Phototypesetting

An informative and educational feature of the Composing Room meeting was the combined address and movie presented by Earl Godshall, manager, Fotosetter Field Div. of Intertype Corporation. Godshall presented his subject under the title of *Progress Review and Future Trend of Photocomposition*.

A panel of executives familiar with their firms' adventure into photocomposition accompanied Godshall to the platform for the purpose of answering questions from the floor. These were: Richard Hoffmann, Milwaukee (Wis.) *Journal;* George Benedict, Evansville (Ind.) Printing Corporation, and Alex Posick, South Bend (Ind.) *Tribune*.

Godshall stated that 10 newspapers and one weekly magazine supplement printing plant are now doing Fotosetter composition. In the supplement printing plant mentioned above no metal type is used—all of the composition is set on two Fotosetter machines.

The speaker explained the step by step procedure in producing an advertisement by phototypesetting. One of the interesting recent developments in photocomposition is the speed with which as many proofs as are needed may be furnished quickly at reasonable cost. This consists of the use of a translucent Autopositive paper wrong reading

No matter what the job...

WOODSMAN *serves you best!*

Sintered Tungsten-Titanium-Carbide, 91.5 Rockwell A scale hardness, the most wear resistant metal mastered by man, molded and fitted into a precision perfect blade, superfinished by diamond lapping with the original WOODSMAN MAGNI-SHARP process . . . *This is* WOODSMAN . . . the finest carbide tipped blade ever introduced to the graphic arts industry!

Stereotyper, compositor, electrotyper or engraver — no matter what your job — whether you're cutting zinc, copper, plastic or wood, WOODSMAN is your guarantee of performance unmatched. *Write for details, brochure, demonstration.*

NORTH AMERICAN PRODUCTS CORP.

P. O. Box 211, Center Grove Rd., Edwardsville, Ill.

positive reproduction of an advertisement by direct contact printing from the madeup advertisement. This is used as a secondary master to obtain the quantity of proofs needed. Proofs of the advertisement are made by the diazo system of copying from the Autopositive master. Godshall stated this method has increased proof quality and has decreased the cost of materials used in proofing photocomposition by approx. 60%, as well as being a faster operation.

The film demonstrating how photocomposition is being used in a number of newspaper publishing plants was made from a sound-slide presentation at the ANPA Mechanical Conference, Chicago, last June 7.

After the showing of the film, questions were asked from the floor and were answered by panel members.

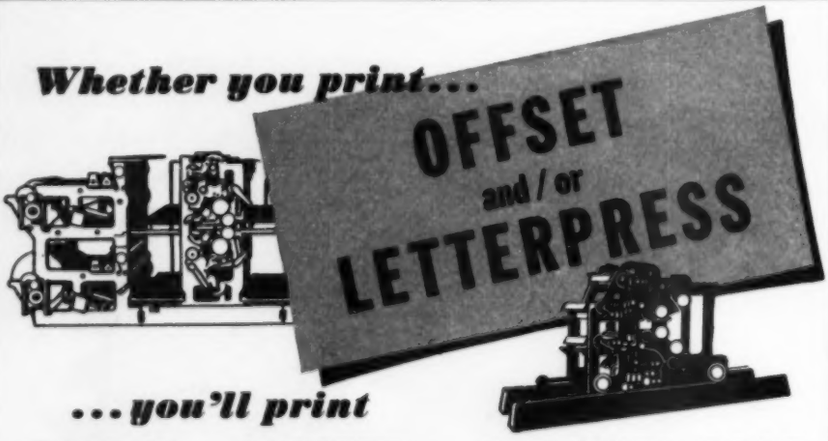
Linotype's ProType Display Composition

The final speaker was Herb O'Sullivan, applications engineer, Mergenthaler Linotype Co. His address was accompanied by the use of slides and was entitled *Linotype Introduces ProType*. ProType is a method of producing photomechanically display lines of type in positive form on paper. The sections of composition may be cut with a masking knife and affixed to the layout or camera copy. ProType negative letters are exposed directly on the sensitized paper one letter at a time in alignment and proper set-width measure.

The ProType machine consists of a board approx. 24 in. sq. tilted at convenient working angle. The type characters from which the exposures are made are in one piece negative form. The table is illuminated from underneath by fluorescent light. Mounted on the upper surface of the board are the sensitized material (paper) carriage, font track, spacer tracks, contact platen, upper and middle light shields. The movable exposure lamp is used to expose the negative letter to the sensitized paper. The light is controlled by a finger switch. The lamp housing also contains the contact-pressure glass on which is mounted the letter mask. The letter mask is supplied with an adjustable opening which is adjusted before commencing operations to the width of a capital W of the point size font in use.

O'Sullivan stated there are over 10,000 different fonts available ranging from 6 pt. to 90 pt. Single or consecutive lines up to 16 in. width and depth can be handled. After a line or lines of composition have been exposed, the paper is developed and fixed and the right reading positive, after trimming, is affixed to the madeup copy or layout, or may be used in other ways for photomechanical type reproduction, especially if hand-drawn art work is to be included. Angled or curved lines may be composed readily.

Whether you print...



...you'll print

FASTER • BETTER • AT LOWER COST

with a HESS & BARKER

WEB-FED OFFSET PRESS

1 to 4 colors

•

800′ per minute

•

All roller adjustments quickly and easily made

•

Running register control

•

Print coated stock; book papers; newsprint

•

Accurate ink and water control at ALL times

•

Use conventional offset, zinc, aluminum, or "D.I." plates

WEB-FED PERFECTING LETTERPRESS

1 to 6 colors

•

800′ per minute

•

Better accessibility *greatly* reduces makeready time

•

100% hairline register at high or low speeds

•

Print coated or uncoated stock

•

Perfect ink distribution—ALWAYS

•

Use stereotypes, electrotypes, or rubber plates

WIRE, CALL, OR WRITE FOR FREE DEMONSTRATION OR LITERATURE ON EITHER OF THESE OUTSTANDING PRESSES

HESS & BARKER

212-22 SOUTH DARIEN ST., PHILADELPHIA 7, PA.

WAlnut 3-0248

William A. Henderson was recently appointed assistant general sales manager of R. Hoe & Co., Inc., according to Walter C. Cooper, vice president and general sales manager of the company. Henderson is a graduate of the School of Engineering, Yale University and was earlier associated with Airborn Instrument Laboratory.

Photopress

(Continued from Page 73)

The first three men that the firm employed are still with Photopress. The men now hold supervisory positions and include Horace Bowden, pressroom; Sam Amedeo, platemaking; and Arthur Gockman, bindery. Andrew Pedersen and Raymond Bishop joined a few years later. They, too, are still with the company as platemaking supervisors.

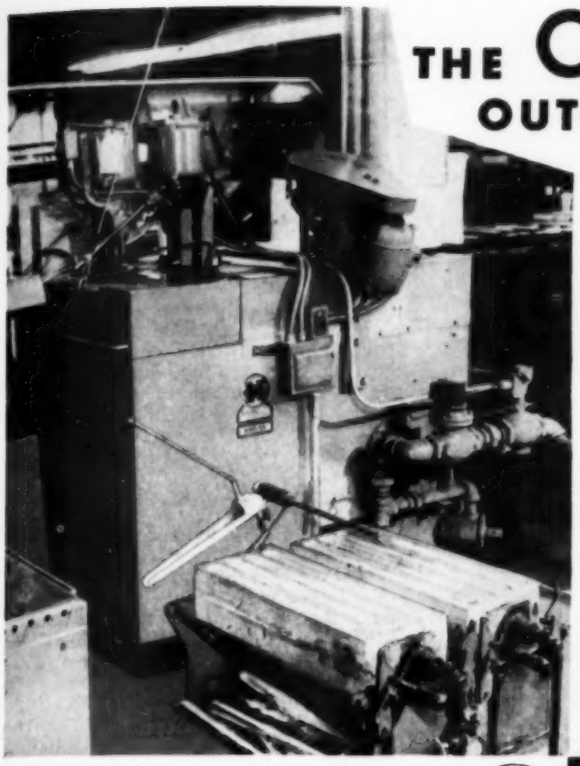
For the first five years, though, progress was slow. There was growth enough so that Photopress moved to larger quarters in Chicago's Printers' Row. After a 20 year stay, ground was broken on April 19, 1954, for the construction of the new plant and facilities, 12 miles west, in Broadview, Ill.

New Shipping Facilities

An enclosed all-weather loading dock with four loading stations accommodates motor carriers. Two of the stations are equipped with Wayne Industrial Hoists (hydraulic levelators) with 20,000 lb. capacity.

Motor carriers have access to numerous well known and well traveled roads near the plant, Congress Street Expressway, Roosevelt Rd. and Mannheim Rd. as well as Washington Blvd., Lake St. and North Ave.

Although the plant is adjacent to



This Nolan Remelter at the Boulder Daily Camera, Boulder, Col., has removed a troublesome bottleneck in *Camera* production. Nolan Remelters are available in capacities from 600 lb. to 10 ton.

THE CAMERA'S PRINTING OUTGREW ITS PRODUCTION

But One Nolan Combination Remelter Restored Metal Flow

In 1954 the *Boulder Daily Camera*, of Boulder, Col., developed growing pains in the metal department. Printing up to 40 pages daily the *Camera* outgrew its melting equipment. Metal shortage headaches set in.

Then a 3-ton Nolan combination Stereo-Type and Repigging Furnace with Nolan Twin-type 16-cavity water-cooled mold was installed, along with a Nolan Flat Caster and Flat Scorcher. Using exterior heaters only, the Nolan supplied an ample flow of metal at all times. "We get our pigs poured in spare time," says Production Manager C. A. Monroe, "where formerly we had to wait until all page casting was completed."

Metal-hungry presses create remelting problems. The Nolan Furnace cuts repigging time by 50%. Melts a full pot from a cold start in less than 2 hours, subsequent loads 1 hour. Oxidation, dross and metal loss reduced; the drip-proof valve never freezes. Custom designed installations for specific requirements. Write today, without cost or obligation, for the facts on Nolan Remelters and Stereo equipment, or for a call from a Nolan Engineer.

NOLAN Corporation — Dept. 23 — ROME, NEW YORK

the Indiana Harbor Belt Line Railroad, it does not have a siding and at present does not require one. The frim buys most of its paper from local mills in Wisconsin, Michigan and Southern Ohio. These are in the range distance of overnight truck trips.

Automatic Barcol overhead doors provide access to the loading dock from three areas—stock room, shipping room and bindery.

Parking Facilities

The main entrance of the building faces North, with an employees' entrance on the west. A visitor parking lot, 125 ft. by 75 ft. is maintained in front of the main entrance. An employee parking lot, 150 ft. by 350 ft. is located at the South end of the property. It accommodates about 133 automobiles. Flood lights located on the roof of the building illuminate the parking lots at night.

Description of Building

The building is constructed of face brick on the North and West sides and aluminum siding on the South and East sides. The North side of the office and the lobby are trimmed in aluminum sash. The inside walls of the lobby are covered with Japanese grass cloth. A decorative stone pylon extends into the lobby and also acts as an identifying marker for the plant. Enameled steel letters spell out the firm name. The pylon is about 33 ft. high and 22 ft. wide. Two banks of four floodlights each are positioned on the roof so as to illuminate both sides of the pylon at night. Floors throughout are concrete, sealed and surface hardened. The floors of the office and employee service areas such as the locker and lunch rooms are asphalt tiled.

Lighting and Heating

Fluorescent lighting predominates. In the office the flush mounted fluorescent lighting fixtures are enclosed; in the plant, they are of the open drop type. The art department and the typing room are equipped with luminous ceilings to provide illumination. In the platemaking department some of the fixtures are equipped with yellow tubes consistent with the needs of subdued light.

The mechanical equipment room houses two Cleaver-Brooks 100 h.p. automatic oil-fed steam boilers. Oil is stored outside in an underground oil storage tank with 12,000 gal. capacity.

Two 100 T. compressors are located in the mechanical equipment room to provide air conditioning and humidity control for the following areas: Pressroom, platemaking, stripping and layout, opaquing, dot etching and camera rooms; also in the men's and women's locker rooms. Units in the fan room provide air conditioning for the general office area which includes the art room and art director's office, executive offices, typing room and employee lunch room. A cooling tower is used for the recirculation of water so that it is reused in the air-conditioning system. Two 25 h.p. Schram units provide compressed air.

New Platemaking Facilities

With the move to the new location, considerable new equipment was ordered. For example, two of the largest Harris multicolor offset presses were purchased, a 76 in. four color and a 76 in. two color. These large presses imposed a need for larger platemaking equipment.

Since Photopress is primarily a quality short-run house and is noted for its extensive preparatory work, this was an opportunity to expand its platemaking and processing facilities. Practically all new equipment was installed. There are five cameras. These include a Consolidated 31 in. color camera; a Valette 26 in. line camera; a Valette 31 in. small halftone camera; a Valette 40 in.; and a Valette 40 in. line camera. All are equipped with Macbeth or strong Grafarc lamps and a Luxometer Timer.

Other equipment in the platemaking room includes new stainless steel Brown Mfg. Co. sinks, two Models PLB and PLD, Rutherford photocomposing machines, six whirlers, three vacuum frames, various tables, and three verticals. Two of the horizontals are the large Rutherfords equipped with electronic controls for heat and speed. Two of the vacuum frames are the new large Brown Mfg. Co. frames and the third is a Douthitt. Eight banks of infrared lamps have been installed over a table to hasten the drying of a plate after it has been lacquered and developed (Fig. 2).

An exit from the platemaking room to the South leads to the entrance of the graining room. Here two large Zarkin grainers are in operation together with auxiliary equipment. Two doors on the West side of the platemaking room lead into the stripping and layout section. Since original layout, a chemicals room has been added. Developers, plate coatings and fountain etches are prepared in this room. Plate coatings are stored in a refrigerator.

A portion of the stripping and layout department was set off for office space for the plant superintendent and platemaking supervisors. The office is elevated to give a good view of operations in the pressroom, stripping and layout room and the opaquing room.

Pressroom Features

Photopress management believes a pressroom should be designed so that it's possible to get a new press into it. In the old Photopress pressroom that was a most difficult and time consuming task. The new pressroom not only is supplied with large double doors to take care of the regular inplant trucking but on one side transoms over the doors provide a larger opening when needed. Adjacent to the doors leading from the pressrooms into the shipping room is a second panel opening which is normally closed. It is almost ceiling height to accommodate the biggest of equipment.

The pressroom is 120 ft. by 140 ft. in size. A wide aisle separates two batteries of presses. All the presses are of Harris make. Entering the pressroom from the stripping and layout department, the presses to the left start with a 35 in. by 45 in. two-color, a 41 in. by 54 in. two color; a 42 in. by 58 in. two color; a 41 in. by 54 in. single color, a 42 in. by 58 in. single color and a 52 in. by 76 in. four color. On the right there are three 35 in. by 45 in. single color presses, a packing table, a 52 in. by 76 in. two color and a 42 in. by 58 in. four color. To the extreme right of the room against the wall are five small one color presses, making 16 presses in the room in all.

Each of the presses in the battery lineup is equipped with a pressman's table with locked drawers for each member of the crew, and shelf space for printed sheets. These tables are custom made in accordance with the press operator's specifications. At the feed side custom made cabinets are available for makeready sheets and similar materials.

Gordon Townsend, maintenance supervisor, also built a packing table with a reel rack which holds up to six rolls of packing paper in thicknesses of 0.002 in., 0.003 in., 0.006 in. and 0.010 in. (Fig. 3). The surface of the table is striped with white paint and marked off in black lettering to designate size of makeready sheets to coincide with press models.

Good Housekeeping

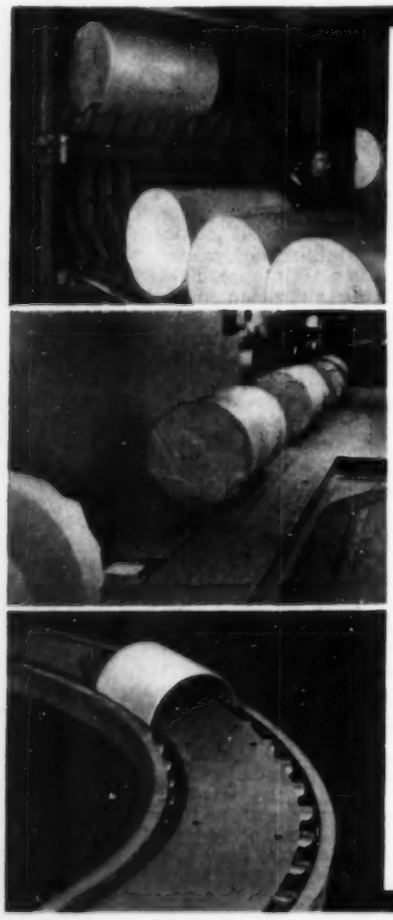
Good housekeeping practices are most evident in the pressroom. Each press has been mounted on press pans, all of which are kept clean. Photopress management believes good housekeeping and quality work go hand in hand.

Ink and Roller Room

Because of lack of space it was difficult to maintain an ink and roller room at the old address. All the plans, therefore, of what the firm would like in the way of an ink and roller room were incorporated in the new plant. Color matching is done in this room and a new three roller ink mill has been added as new equipment. A Jomac roller cleaner is used for dampener rollers and racks for the storage of rollers have been installed.

Bindery Equipment Moved

Bindery equipment was moved intact. The two larger cutters, a Seybold 64 in. automatic spacer and the Seybold 57 in. were positioned near the pressroom so that the movement of work which needed to be cut before going to the folders would not have to backtrack. The bindery is located next to the shipping room and loading dock to facilitate movement of the finished work. Besides the two large cutters, the bindery is supplied with a Seybold 51 and a Seybold 37 which are used mostly for trimming work. Cleveland folders including sizes 21 in. by 20 in., 22 in. by 28 in., 25 in. by 38 in. and 25 in. by



Prime mover for
NEWSPRINT ROLLS OR STEREOPLATES

Up...down...or horizontal—whatever your conveying problem, there's a Gifford-Wood unit or system *already in use* that comes close to meeting your problem.

For years G-W has solved big specialized handling jobs for newspaper plants. Electric and pneumatic drops and lifts for newsprint rolls (top photo)...horizontal conveyors...and automatic interfloor handling systems for stereoplates (bottom) have all been built and installed in the plants of daily newspapers and leading printers. And all are operating successfully today, with speed, efficiency, savings, and complete protection for paper rolls and stereos.

Ask a good engineer about Gifford-Wood conveying systems for newsprint, stereos, magazines, mail sacks, bundles, or broke. Then write for full details on actual G-W installations.

***Free! Idea Book** on engineered materials handling systems.*
Ask your nearest G-W office.

GIFFORD-WOOD CO.

Since 1814 • Hudson, New York

New York 17, N. Y.	St. Louis 1, Mo.	Chicago 6, Ill.
420 Lexington Ave.	Railway Exchange Bldg.	565 W. Washington St.

3120

42 in. are placed in an area so as to be in line with the big cutters. Two Christensen gang stitchers, four single stitchers and a Macey collator comprise the major portion of the remainder of the bindery equipment.

Stockroom Described

A skylift, and two transporters handle stock in the stockroom. A battery charging station is situated just outside the loading dock area. Skids are angle parked in the stockroom so as to provide access to the loads and conserve aisle space. Some are piled two high and a few three high, depending upon the height of the loads.

At the extreme Southwest end of the stockroom is the solvents and oils room. This room is equipped with blowout windows, set lower than the adjoining floor area with small ramps to facilitate movement of vehicles. It is sprinklered as is the entire building. A 1200 gal. benzene tank is located just outside of the room and the solvent is pumped in and drawn off as needed. Lubricating oils are also kept in this room.

Since the original layouts, space between the solvents and oils room and the loading dock has been allocated to the maintenance department. Power tools, welding equipment, pipe threaders, saws, drill presses and the usual type of machine shop and maintenance equipment is found here.

Labor Supply Good

Photopress employs 175 people. Only a few failed to come out to the new plant. What surprised E. C. Chalifoux was that the labor supply is more plentiful in the suburbs than in Chicago's loop. Besides the new building and parking facilities, there is much to attract personnel. For example, the company has a lunch room, modern locker facilities and liberal policies. The lunch room is serviced by a caterer who brings in sandwiches, some hot dishes and beverages. The room seats 64 people Lunch periods are of 45 min. duration and are staggered.

Employees are exposed to training programs about latest developments in the lithographic industry. E. C. Chalifoux conducts training classes using Lithographic Technical Foundation audio visual training aids and technical bulletins.

The president and his staff are concerned about the safety of Photopress personnel. Everything is done to provide safe working conditions at all times.

Customer Policy

Customers have been encouraged to come into the Photopress plant to discuss and work out problems in connection with their particular jobs. At first Photopress was concerned that the distance away from the Loop might affect this policy. A happy solution was reached, particularly for those who may have to stay overnight due to inclement weather or transportation problems. Adjacent to the president's office is an executive conference room which is furnished like a living room with two sofas which are also beds. In emergencies, this room can be converted into sleeping quarters. There is also a small dining room where dinners can be served and where dinner can be prepared for overnight guests. Behind a folding slat curtain is a sink, electric stove and refrigerator to make utilities complete. A bathroom with tiled shower and bath completes the business apartment.

Work by Photopress

Photopress now does a complete range of lithography with no specialization. It does much advertising literature, catalog insert work for mail orders, displays, albums, children's books, house organs and pamphlets. It prides itself on fine book production.

Father, brother and three sons are in the executive line-up for Photopress. E. J. Chalifoux, father, is president and co-founder of the firm. His brother, Raymond S., is vice president in charge of manufacturing. Son, E. C. Chalifoux, is secretary; another son, Robert S. Chalifoux, is treasurer and a third, James J. Chalifoux, is assistant vice president (Fig. 1). Other officers include M. H. Post, vice president in charge of sales promotion, and Russell S. Fallon, vice president in charge of sales.

Other production executives are Ernest Kroeppelin who is supervisor of process color dot etching and Otto Smith, a pressroom supervisor. Kroeppelin has been with the firm about ten years while Smith's service record is three years.

DOTS AND LINES MEASURED AT A GLANCE...
to
.0001"
(= one ten thousandths!)
The Optical Depth Gauge is designed to eliminate antiquated depth measuring and inspection processes in the graphic arts. It features low cost, versatility and simplicity of operation; permits rapid, precise inspection and measurement of width and depth of halftone dots to .0001". This portable gauge is used on both flat and curved plates, gravure cylinders, electros and stereotypes. As an inspection tool, it will enable you to instantly detect shoulders, undercuts, rough bottoms as well as loss of depth and shrinkage during the casting processes.
Write for Brochure AO. It gives detailed information regarding the complete line of Unitronic Depth Gauges by American Optical.
unitronics, inc.
472 PAUL AVENUE
FERGUSON STATION
SAINT LOUIS 21, MISSOURI

Lawson Midwest Manager—The appointment of Jim Willis as midwest manager for E. P. Lawson Co. was announced by D. W. Schulkind, president. Willis will make his headquarters at Lawson's Chicago office. Willis is an active member of the Printers Supplymen's Guild of Chicago, the Chicago Litho Club and the Printing House Craftsmen.

Old-timers Receive Award—Charles E. Meikle and John H. Juhl were recently presented with $100 U. S. Savings Bonds on the occasion of their 30th and 20th anniversaries, respectively, with the Service Department of the E. P. Lawson Co. Both veterans were later feted at a party of the Company's New York Office and formally inducted into Lawson's "20 and over" club. Presentation was made by Wm. J. Hourigan, treasurer of Lawson.

Wesleyan Press

(Continued from Page 58)

efficiency resulted from having the book facilities located in a separate building, and warehousing in two additional structures.

The new plant, consolidating all activities in a one-floor total of almost 175,000 sq. ft., consists essentially of two large rectangular areas. The office and circulation department wing, 340 ft. by 120 ft., forms the front of the unified structure. Back of its is the 'production' area, 520 ft. by 240 ft., where the only space not related to the mechanical end of the business is that occupied by a kitchen, employe cafeteria and rest rooms. The offices are air conditioned and the press and composing rooms are ventilated with filtered air. With ultimate enlargement in mind, the plant is so placed on its 35 A. site that its production floor space can be doubled by expansion in two directions. There are 500 employees at present.

How the Work Flows

All raw materials and finished work feed into a flow of operations that moves across the production area from the receiving dock at the North end to the shipping dock at the southwest (Fig. 1). Rolls of paper, engravings, ink and other supplies arrive either by truck or rail at the receiving dock, where there is an enclosed rail siding approx. 145 ft. long, on which can be handled three cars simultaneously. Stored on end until they are needed, the paper rolls move next to the pressroom, where there are three 32 page Goss rotary presses and seven other presses—one Miehle two color, two Miehle 41's, a Miehle horizontal, two Miehle Verticals, and one Miller Simplex. Adjacent to the pressroom is the composing department, into which copy, art, proofs, and layout dummies are funneled. After printing, the various publications go to the bindery and then either to temporary storage or the mailing area.

Concurrently with this workflow through the production areas, labels and envelopes move from the subscription department through the addressograph room and finally to the mailing room, where they come together with the printed material to be mailed.

Unobstructed floor areas have been achieved in the production departments through use of Austin's H-section trusses, providing a clear span of 60 ft. between columns, which are on 20 ft. centers. Clear height is 15 ft. Thirty-foot steel beams are used in the office areas. Both the plant and office are covered with a Tectum roof deck which provides a ceiling with both good appearance and sound deadening properties. The lobby, conference room and executive offices are provided with a suspended ceiling of acoustical tile, with recessed lighting. In all other areas except the receiving dock and book storage, suspended fluorescent lighting fixtures provide light intensities varying with requirements of the work performed. The entire front section of the plant is face brick, while the remaining walls are of concrete block below a center strip of sash, with corrugated asbestos siding above the sash.

The Employee Corridor

Employee traffic in and out of the plant, as well as inside it, is controlled and held to a minimum by an employee corridor, opening onto the North side parking lot and running between the office and produc-

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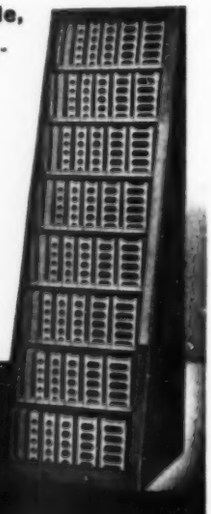
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types • brass rule • lightmetal furniture
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tion sections. The corridor permits easy access to all major work areas, the employee cafeteria, locker rooms and lavatories, and largely removes the necessity for employees to walk through departments other than where they work.

The same idea has been incorporated in the layout of the office section. An interior corridor runs along the offices lining the outside walls of the North and West sides. Since this runs into the main employee corridor to the East of the offices, the entire office section is in effect circled by an interior passageway.

Throughout the office section, movable wall panels have been used with maximum effectiveness to separate offices and departments. On the office side of the main employee corridor, these panels run to the ceiling. The Addressograph and Graphotype rooms also are completely enclosed with floor-to-ceiling panels, to keep noise from circulating. On the production area side of the employee corridor, there is a load-bearing, concrete block firewall.

Materials Handling Devices

At all stages of production, materials handling equipment is used that will be most effective for the purpose. The 47 in. rolls of paper are unloaded from box cars by power trucks equipped with Bartel devices and then stacked on end, three-high. When the paper is ready for use, different power trucks with special rotating clamps take the rolls to the pressroom, unloading the rolls horizontally. Crane hoists lift the rolls onto the rotary presses. Publications printed on the rotary presses move from the pressroom to the work-in-process area by overhead newspaper-type conveyor, while publications printed on flatbed presses are moved by hand pallet trucks. Specially designed chair trucks take publications to the mailing section.

A lightweight continuous cable conveyor circles past the mailing tables and greatly facilitates handling of mail sacks. Each hanger on the conveyor is fitted with a top and bottom hook—for empty and full bags, respectively. Beside the work table of each mail clerk is a specially built stand for holding an empty mail sack. When a sack has been filled, the clerk slides the stand under the conveyor and hooks the bag on a hanger as it moves by. She then takes an empty bag and places it in the stand. A special tripping lever at one end of the conveyor has been set up so that it disengages filled mail sacks and causes them to slide down a chute preparatory to dispatch. Empty bags slide around the tripping lever, however, and continue to circle until filled and dropped off.

The boiler room of the basementless plant is located out of the way on the North side, next to the receiving dock. It houses two 100-h.p. Boilermasters, fired either by gas or oil, along with a 30-h.p. stand-by boiler and two 62.8 T. Worthington compressors and evaporating condensers. Hot water for heating is circulated through heating coils, with a duct system for the office section and unit heaters in the production area. The pressroom, because of special conditions there, is completely enclosed by concrete blocks with an American Air Filter system, mounted above the trusses, that changes the air every 6 min. Air is drawn by fans through filters, with half the air being ejected and half being returned to the system drawing fresh air from the outside. The composingroom air is similarly filtered. The cafeteria is also located at the North end, with the kitchen adjacent to the receiving dock so that food, trash and equipment can be handled easily in and out without traffic through the plant proper.

As a subtle aid to efficiency and safety, the principle of color dynamics has been used effectively throughout the production areas of the plant. Walls are painted in two tones of green, with a darker band from the floor to a height of 4 ft., and a lighter green extending to the ceiling. Exposed electrical equipment is painted orange, while yellow indicates hazardous or moving parts of machinery and equipment. When printing equipment was moved from the old plant every piece was torn down and painted.

Exceptionally clean and unlittered throughout, the plant is provided with an efficient system for disposing of waste paper from the bindery. Scrap paper falling from trimming machines is sucked into tubes and then blown by forced air to a 72 in., upstroke Economy baler located underneath the shipping dock. The machine squeezes scrap from a pile 17 ft. high into a bundle 4 ft. high.

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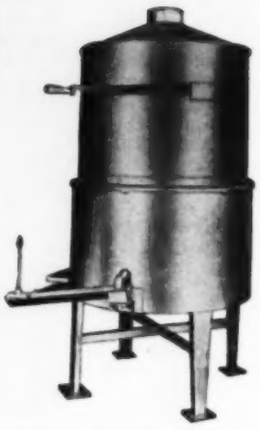

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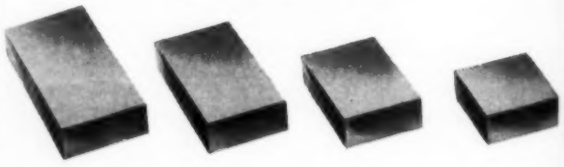

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Materials Handling

(Continued from Page 46)

maintain the floor, walls, lighting, windows, etc. Since moving into our new plant, we also have added one full time mechanic and one full time electrician to the payroll. So, we now have one service employee for every 10 production employees. That is about twice the average number of service employees per production worker in the printing industry.

Molding Press Use Aids

"We consider our Ostrander-Seymour Co. 500 T. molding press one of our best pieces of materials handling equipment. This press allows us to deliver a 12 oz. mold instead of an 86 lb. form to the foundry for electrotyping. Instead of requiring a man and truck from the electrotyping firm to handle Feather Company work exclusively, we can now deliver plastic molds to the foundry as easily and quickly as we do proofs, and at less cost and in less time than when we were located in the center of Cleveland."

Galley Transfer Trucks

Feather Company is particularly proud of another piece of materials handling equipment because it is homemade. As in many cases, necessity was the mother of invention. Since the company places its makeup tables as close as possible to the presses, they were relatively far from the composing room worktops. So instead of having its comps put the madeup pages of type into stationary galley cabinets, the firm has them put the pages into transfer trucks. These transfer trucks are simply the standard galley cabinets with casters mounted on the four corners so that they can be wheeled from one department to another. Thus the madeup pages are collected in the transfer trucks until all the pages for a form are assembled. Then the pages are wheeled to the imposing department where they can be taken out of the trucks one at a time, and put directly into the chases when making up press forms.

Features of the Plant

The smaller job presses are located nearer the paper storage area and bindery (See flow line B on the accompanying flow chart). That was done because the number of jobs run on those presses is about five to eight times greater than the number run on the large cylinder presses. Also the larger cylinder presses are located on the end of the cylinder press line toward the paper storage area and bindery.

In the bindery, all the stitchers, cutters and the Sheridan gathering machine deliver toward the shipping room.

Note the location and design of the truck loading and unloading dock. Incoming paper can be

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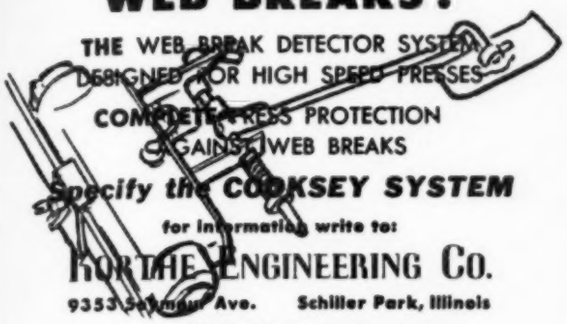

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brought into the paper storage area through the receiving door without ever passing through the shipping room. And, conversely, we can ship off the truck dock without crossing through the paper storage area. Incidentally, we had our company truck built to order so that the bed of the truck matched the height of the loading and unloading platform. Note, too, that we have an elevator on the shipping platform to accommodate trucks of varying heights from our suppliers and customers.

Paper By Skid Load

"We buy all our paper by the skid load," continues Feather. "Even if we want only 5000 sheets of a particular coated stock, for example, we will buy enough to get a skid load. At the other end of the job, we generate enough paper scrap in any one day to keep a man busy 4 to 6 hrs. hauling it away from the bindery machines. That is why we installed the overhead air exhaust system for handling waste paper from the Sheridan gathering machine and one of the Seybold cutters. This scrap is taken automatically through a duct to the baler room.

Ample Aisles Essential

"Finally, but by no means least important to our materials handling, are the generous aisles we allowed in our new plant. We actually heard more about the 'waste space' in the aisles than anything else at our recent open house. It was suggested to me that we put a couple of presses in the main aisle. But I say we would extend the plant when we need added production area rather than fill up that aisle. It's the main stem. Skids of paper are taken to the feed end of the cylinder presses down this aisle. It's large enough to allow us to hold a skid or two of paper right beside the press when we know it will be needed on a job but can't be accommodated on the press feeder all at once.

"Work in process from the pressroom is temporarily held in areas adjacent to this main stem so that they can be quickly reached when needed in the bindery or shipping room.

"This wide main aisle expanded the size of the plant to be sure. It made the distances between paper storage and pressroom and between pressroom and the bindery somewhat longer, too. But in line with our general philosophy of making the job as easy as possible, we preferred to provide a wide aisle than to save a few steps. It doesn't improve handling to save those few steps and in the process make it more difficult to move the shorter distance through narrow, crowded aisles.

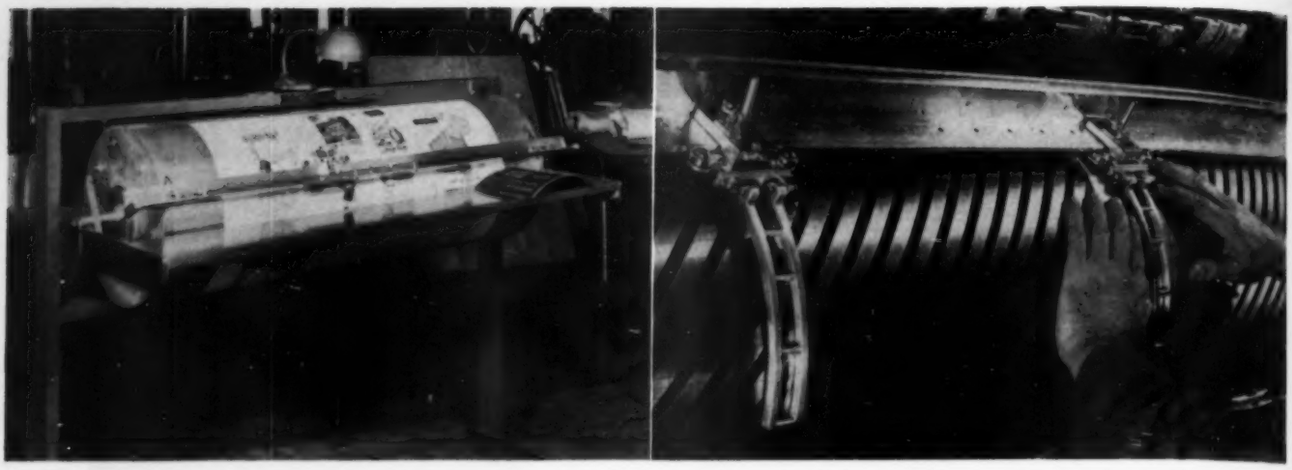
Aisles Are Kept Open

"What we have aimed for in the design of our new plant and in our daily operation at William Feather Co. is to provide ample roads for men and materials to travel, then to keep those roads clear of obstructions and blocks, and finally to provide our men with clear instructions as to what is expected of them. This means a daily effort to keep aisles open. It requires a long educational process to teach the men to look beyond their own departments. And it means a constant vigilance for new, easier ways to do the job.

Secrets of Handling

"The real secrets of good materials handling are proper plant layout and good housekeeping. By attending to the two latter factors, the roads are provided for men and materials to flow. Policing keeps them clear. Then this do-it-the-easiest-way attitude we seek to instill has a chance to operate.

"Is it worth the effort? We have increased our business eight times during the past 10 years. And we feel good materials handling has played a significant part



Taylor Curved Plate Register System—By means of copy cylinder (left) proofs of plates making up the form mounted on a grid-ruled sheet are registered in exact position as on final production press sheet. The registered readings of the plates on the sheet on the copy cylinder are then transferred, by means of a transparent tab carrying the register dots, to the register bar (right) which is mounted opposite the plate cylinder on the press.

Taylor Rotary Color Plate Register System

A method of positioning and registering curved plates on rotary letterpresses has been developed by the Taylor Machine Co. Manufacturer states savings up to 30% of press plating time have been reported in color printing plants.

The system consists of three units: A copy cylinder and two crossbar attachments—one mounted on the copy cylinder unit and the other on the press plate cylinder. The principle of operation is similar to the grid-line method of identifying areas on a map.

A sheet is ruled on a lineup table and plate proofs are attached in the exact position that the printed impression will occupy. This entire sheet is then fixed in position on the copy cylinder. In the crossbar which spans this cylinder uniformly spaced holes are provided, each designated by a numeral; around the ends of the cylinder are evenly spaced holes indentified by letters. Stop-pin attachments at each end of the crossbar engage the cylinder holes, and a movable mechanism, mounted on the bar, engages the numbered holes. Extending from this mechanism is a transparent tab which carries register dots. The operator scans the mounted proofs on the copy cylinder through this tab, pin-points an exact area of copy with the register dots, then transfers the tab with register dots to its proper position on the plate.

The press cylinder crossbar is attached at both ends to metal rings which are mounted adjacent to the

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bearers of the press cylinder. Lettered and numbered holes in these rings and the crossbar correspond exactly with the holes in the copy cylinder and bar. A movable mechanism, similar to that on the copy cylinder crossbar, carries transparent tabs with small round holes in a corresponding position to the register dots on the tab from the copy cylinder. When the press mechanism is moved to the number-letter position on the crossbar which corresponds with the same location on the copy cylinder, the plate can be quickly positioned simply by moving it until the register dots on the plate are centered in the ⅛ in. holes in the locating tab. For further details, please mention PEE No. 81 in your request.

Babcock Press Corp. Is Sold to Financier

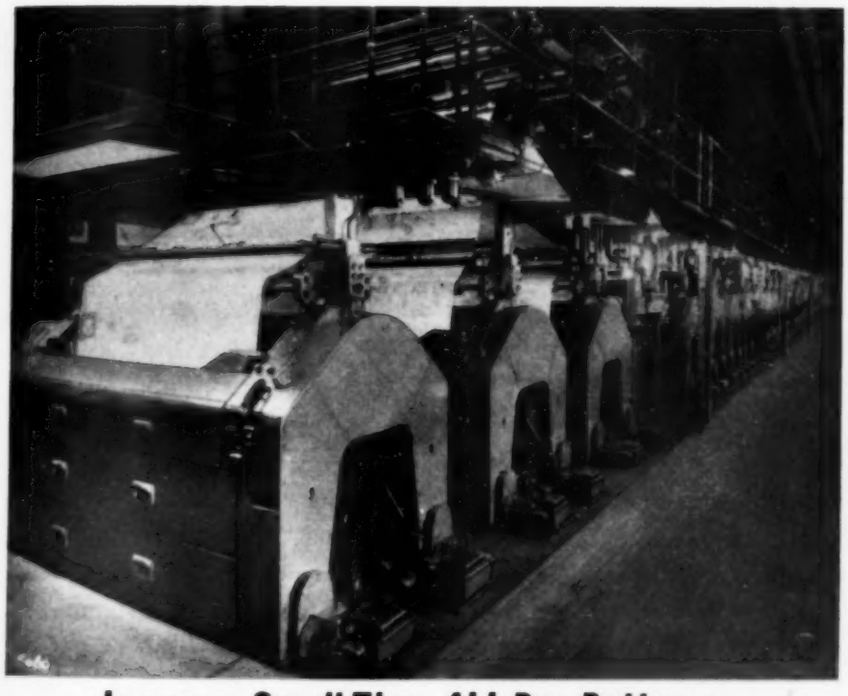
Babcock Printing Press Corp., with $5 million in assets, was recently purchased by Sydney L. Albert, Akron (O.) financier, and president of Bellanca Aircraft Corp. The company was acquired from John F. Cuneo, president of the Cuneo Press, Inc., Chicago. Albert will be chairman of the board of directors of the Canton company, the name of which will be changed to Babcock Printing Press Co. by incorporating in Ohio. Present operating management and offices will be retained, President Charles W. Ginsberg said.

Employing 400 men and women, Babcock designs and builds multicolor magazine and rotogravure presses. It recently put into operation what is said to be the largest rotogravure press in the world at Neo Gravure Co., Chicago. Ginsberg reported Babcock will continue to build magazine presses for Cuneo Press and its associated companies and other printers and publishers. The company has a large backlog of new press business. Ginsberg also reported the company now is at work on six large five-color magazine presses.

One of Babcock's major products will be the manufacture of a newly developed rubber tire press for the Albert-Harris Co. of Akron. The press is expected to revolutionize the vulcanizing of tubeless tires. The new machinery will be known as the Pulsamatic tire press, Ginsberg announced.

Babcock has been manufacturing large presses to produce such magazines as *Life, Time, Harper's Bazaar, House Beautiful, American Weekly, Good Housekeeping* and *Town & Country.*

Vietinghoff Joins Chemco—The Chicago office of Chemco Photoproducts Co., Inc., announced that Donald F. Vietinghoff recently joined the sales organization as lithographic sales-technical representative. For the past three years he has been lithographic instructor at the Chicago Lithographic Institute.



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EDROY PRODUCTS CO., DEPT. 9, 480 LEXINGTON AVE., NEW YORK 17

Printing Week Standouts

Two outstanding Printing Week programs were made up this year by the Michiana Club, South Bend, Ind., and the Kansas City (Kans.) Club. The Printing Week banquet program produced by the Michiana Club was an exceptionally attractive piece with blind embossing and steel die engraving used to illustrate the cover. The Kansas City Printing Week banquet program utilized effective typography to announce the program which included Ferd Voiland, jr., International second vice president, as the speaker.

Pressmen's Home Gets Miehle Vertical—A new Miehle V-50 Vertical was recently placed on permanent loan in the Technical Trade School, Pressmen's Home, Tenn., by the Miehle Printing Press and Mfg. Co. The Vertical is Serial No. 20,000, marking a milestone in the manufacture of Miehle presses. It will be used for instruction purposes in the school which is operated by the Intl. Printing Pressmen and Assistants' Union.

Typesetting Association Holds Meeting—After several months of organizational activity, the Pacific Coast Typesetting Assoc. meets March 15 through 17 at the St. Francis Hotel in San Francisco for its first regular conference. First conference will include election of permanent officers, adoption of a constitution and by-laws, and discussions. The organization is made up of firms in the states of California, Oregon, Washington, Arizona, New Mexico, Nevada and Utah, and is affiliated with the Intl. Typographic Composition Assoc.

Look Starts 20th Year With "Letterpress Look"

Look Magazine started its 20th publication year in January with record increases in 1955 advertising and circulation and with a printed letterpress look. Spokesmen for the Cowles publication, published every other week since 1937, report advertising volume in 1955 exceeded $20 million—an all-time high; circulation in 1955 also reached an all-time high of more than 4 million copies per issue; and more than 80% of its pages are now being printed letterpress from electrotypes.

Four color *Look* pages are printed on 24 and 36 page Cottrell double five color presses. Hoe and Cottrell two color presses run 32 and 64 *Look* pages. Lightweight nickeltypes, curved and laminated, have been used. For several years now *Look* has been using pre-made-ready centrifugally cast and flat cast nickeltypes. Frequently, one set of these printing plates lasts for the total run of over 4 million impressions.

A check with a number of advertisers, *Look* reports, shows that in many cases they prefer letterpress for two reasons. First, the letterpress process permits the advertiser to see several engraver's proofs before the press run begins. Secondly, letterpress can match the proof consistently through long press runs. The letterpress industry has found ways to reduce its costs in the last 10 years through the use of high-speed equipment and improved methods and materials.

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IPI Price Increase

W. F. Cornell, division president of Interchemical Corporation, Printing Ink Div. has announced new prices for news inks manufactured by his firm. According to Cornell, effective April 1, 1956, the price of Regular Black and High Speed Black News inks will advance ½¢ per lb. in tank wagon and tank car deliveries and 1¢ per lb. in drum deliveries, while Flat Bed News inks go up 2¢ per lb. in drum deliveries.

Cornell points out that IPI has not raised its prices on News Blacks since 1953 while labor and raw material costs have advanced as much as 20% over the same period.

A roller manufacturing and processing plant, fourth to be erected by Ideal Roller & Mfg. Co., has commenced operations at Chamblee, Ga. The plant, located at 5100 Peachtree Road, is under supervision of John R. McStatta, former Southern territory sales manager for Ideal. The brick and steel constructed plant is situated on a 4 A. tract of land. A 5 T. crane, roller stripping lathes, mixing and warm-up mills and dusting equipment are part of the equipment in the new plant. Power for the building is supplied by the Georgia Power Co. with a 500 kw output transformer, and an extensive artificial illuminating system has also been installed. Generous window areas with a translucent, tinted plastic clerestory extending 200 ft. along both sides of the center bay have been supplied.

Fast Etching

(Continued from Page 53)

to 0.020 in., and the line bath which takes the remainder of the time.

"A bath costs $6.50. In the halftone machine it lasts us one week in which we will etch about 40 flats 18 in. by 24 in. In the combination and deep etch baths we etch 10 to 12 full page plates and then prepare a new bath. It takes 20 to 30 min. to replace the bath.

"Thanks to the ingeniuty of our employees and the help of the staff of the ANPA Research Institute laboratory, we have greatly improved our method of etching halftones and combination and line jobs. We see many possibilities for further improvements in the near future."

Powderless Etching Progress

Roy Prince, ANPA technical research director, gave a progress report on the powderless etching methods and particularly the Dow-ANPA fast etching process.

"In spite of the fact that the Dow-ANPA fast etching process is not the answer to all types of engraving as yet, 26 newspapers have purchased 45 etching machines and are using the process in their daily production.

"Some engravers may wonder why, if the process can be used both for line engraving and halftone, the combination flat presents a problem. It must be remembered that in the absence of a powdering operation, the equivalent of this operation is obtained chemically. With a particular etchant the degree of protection afforded the sides of the printing areas varies in proportion to the area involved. In other words, the etchant employed is capable of adjustment so that a flat can be made to "blank off," that is cease etching, at a selected depth depending on the size of the area being etched. Where a stereotyping operation is to follow, space depths in the engraved plates should be in the neighborhood of 0.040 in. min. I use the term "space depth" loosely because I am not prepared to accurately define the size of the area requiring 0.040 in. min. etch," Prince said. "However, somewhere between a wide open space, and a 65-line halftone for example, there will be an area which should not blank off with the halftone but must continue etching to a depth sufficient to insure clean printing.

"Certain types of combination flats which you might encounter include borderline areas. By borderline, I mean areas where a multitude of small, individual dots may be present, such as in a wash drawing, and which require in some cases a relief in excess of that given a normal halftone. In many of these cases the skill of the operator can directly affect the quality of the plate etched.

"But, other than the operator, certain limitations have been classified as inherent in the present process. The etchant employed, for example, can be classified as unstable. Diethylbenzene, a mapor ingredient in the etchant, is sufficiently volatile as to be drawn from the bath up into the ventilating stack as a vapor. This means that the chemical propor-

Contract Signed for School of Printing Building — During the celebration of Printing Week in New York 1956, the contract for the construction of the new building for the New York School of Printing was signed. The building to cost $6,211,862, exclusive of school equipment, was designed to meet the manpower needs of the newspaper publishing and commercial printing industries of the New York metropolitan area. The school in its new building will provide high school, apprentice, and journeymen training facilities. Total floor area in the building will be 273,400 sq. ft. and the building will be on a site 44,160 sq. ft. Shown at the signing ceremonies are, left to right, front row: James V. Caristo, president of the Caristo Construction Corp., general contractors; Charles H. Silver, president of the Board of Education; Morris Warshauer, secretary of the Board of Education. In the rear are: Mrs. Betty Hawley Donnelly, secretary, Advisory Board for Vocational and Extension Education; and Don H. Taylor, president, New York Employing Printers Assoc., representing the Graphic Arts Educational Commission. The model of the new building is shown in the picture.

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tions of the remaining etchant have been altered. Also, one ingredient of the line etchant is chemically attacked by other ingredients, resulting in an instability.

"Work by the Research Institute during the past year has been to pinpoint this problem of stability in the etching solution. Many replacement ingredients have been investigated. But, so far, no appreciable improvement in the process has been obtained.

"However the process is used, or however the process may be refined in the future, the quality of reproduction which can be obtained is completely dependent upon the skill, know-how, and attitude of the operator.

"Methods for speeding up the etching of copper and zinc are inevitable. Your specific requirements will govern the process you finally adopt."

Fast Etching Zinc

Lewis S. Somers, vice president, Imperial Type Metal Co., told the session of the development of a new fine grain zinc plate, called Vitaplate, for use with the Dow magnesium etching equipment and modified process or, it can be etched in a conventional machine with nitric acid.

"Numerous engraving shops throughout the country," Somers said, "are field testing the new Imperial fast etching zinc and several have indicated that as quickly as they learn the technique, they will use zinc in place of magnesium. By this I do not mean that the new zinc will replace all magnesium. There is, definitely, a field in which each metal has its own advantages. But it is of great importance to the engraver that both metals can be engraved in the same equipment.

"Some shops are at present etching magnesium and plan to etch zinc on combination flats with only one machine by using the halftone bath and then going down to approx. 0.025 in. by means of two powder bites. Those shops equipped with two or more machines or with the storage tank system offered by the Master Machine people, can undoubtedly obtain much faster results by initially etching the flat in the halftone bath to whatever depth meets their requirements. Then paint out the halftones with a product such as Lith Kem-Ko and continue etching in the line bath, again to the required depth.

"Magnesium is a highly active metal chemically. Zinc is somewhat less reactive and, therefore, is more easily controlled when attacked by solvents. This is the reason for suggesting that through the work done in our research laboratory we have found that the general rules set up by the Dow company for the etching procedure can be followed. However, because zinc etches slightly more slowly with standard strength solutions, a small increase in both the wetting agent (Aerosol EG) and the oil (Diethylbenzene) is definitely advisable. The formulation for the halftone bath consists of: 16 liters nitric acid (42 deg. Baume); 600 grams Aerosol; and 3.6 liters Diethylbenzene. It is essential that, as with magnesium, a small amount of zinc be dissolved into a new bath before starting to etch. A blank flat of zinc (18 in. by 22 in. or 18 in. by 24 in.) should be run in for 10 min. with the paddles at the 600 r.p.m. speed to add the correct amount of zinc to the bath.

"For a 65 line screen, etching for about 2 min. at 600 r.p.m. paddle

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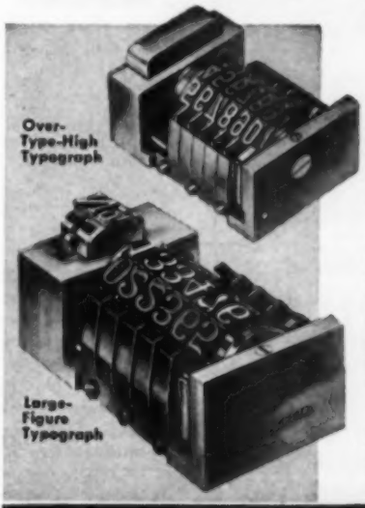

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speed will give a depth of 0.006 in. to 0.008 in. in the halftone highlights, somewhat more in the open areas.

"For a line bath, in our Master etching machine we use a volume of 130 liters and at present we are operating at 72 deg. F. Our bath is: 13 liters of nitric acid (42 deg. Baume); 900 grams Aerosol; 12 liters Diethylbenzene; and 500 milliliters 0.1% gelatin solution. Etch for 2 min. at 560 r.p.m.; etch for 4 min. at 460 r.p.m. and etch for 8 min. at 360 r.p.m. This procedure should give depths of more than 0.020 in. in the open areas.

"Additional etching, with probably the addition of a very small quantity of gelatin, will produce depths of up to 0.035 in. in the open areas. This line bath is formulated for straight line work. If used on combination flats the halftone areas will become pitted. This is apparently the effect of the gelatin. In combination work it appears to be advisable to employ two baths (halftone and line) using the halftone bath to obtain depths of 0.010 in. to 0.012 in. and the line bath with somewhat less or even no gelatin to gain the maximum depth.

"Now please remember and I want to emphasize—what I have just reported is strictly experimental. Every etching machine varies somewhat, every bath varies somewhat more, and every etcher varies a lot. The type of copy is rarely the same and some negatives are good and some are terrible.

"We have found that unless the top has been applied properly, scumming will not be accomplished successfully and very poor results will be obtained during etching. Our only suggestion here is to follow the directions of the top manufacturer. We have found these to be right. Descumming with a solution of potassium hydroxide and potassium permanganate is absolutely necessary. A black scum forms on zinc after this operation. However, it is not objectionable and is easily removed by swabbing with a dilute solution of nitric acid."

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Alexander Reports

William F. Alexander, engraving superintendent, Cleveland *Press*, gave a report on the use of the Acme One-Bite Etcher with bi-metal plate. He said the *Press* was engraving 40 to 60 plates on two shifts with a reduced number of makeovers from the previous powdering method. This was the bright side of the picture, he

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commented. Then, he continued, there is the not so bright side. Some newspapers are reporting that they get four or five flats without any trouble and then the fifth or sixth flat is bad.

At first, Alexander said, we thought the trouble was with the metal. But we are becoming convinced now that it is the chemical that varies. More specifically, the water with which the chemical is mixed varies from one city to another and the resulting mixtures vary also. For example, some cities have fluorides in the water, some do not. Some cities have more or less of other chemicals added to the water. These affect the etching chemicals. It is in this area that research is now going on to determine what can be done to standardize the chemicals or to use alternates which will not be affected by the changes in water chemicals.

Open for Discussion

Moderator A. J. Powers, vice president for research, Chemco Photoproducts Co., Inc., opened a general discussion by both the panel and members of the conference in the audience.

What is the present condition of the Dow-ANPA fast etching process? was the first point discussed. Roy Prince, ANPA technical research director, said that in general he believes the engraver could save up to one-half hour per flat by using the fast etch process. A. B. Fry of Dow Chemical Co., said he believes engravers were turning to the Dow-ANPA fast etching process first for quality and then for time saving. Several members of the session said they like the results of fast etching because the middletone dots were as deep as the highlight dots.

Moderator Powers said the question was often asked: How large does the engraving operation have to become before the Dow-ANPA fast etch process becomes practical to consider? Powers said he used 20 flats in a shift or a shift-and-a-half as a rule of thumb for the size operation to consider converting to fast etch. From the floor came the comment that the number of flats produced isn't the only measure that can be used. The fast etch process can help the busier shop turn out more work with the same number of men. But it can also be used to turn out the same smaller amount of work with fewer men. Either way would effect a savings.

The question was asked: What kind of topping is recommended for use in the Dow-ANPA fast etching process? Powers commented that many users were ordering cold top and burning in at 400 deg. to 450 deg. F. before putting the flats into the bath. Hot top also can be used,

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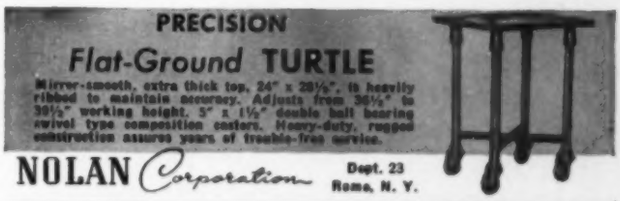
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Great Lakes Mechanical Conference Officers—Conference was held at Hotel Schroeder, Milwaukee, Wis., Jan. 29, 30, 31. From left to right, they are: Conference President Cecil Watkins, production manager, Sidney (O.) *Daily News:* Conference Vice Pres. John E. (Jack) Innis, stereotype superintendent, Indianapolis (Ind.) *Star-News:* Conference Vice Pres. Robert Nelson, production manager, Detroit *News:* Arrangements Committee Member Arthur F. Goetz, composing room superintendent, Milwaukee (Wis.) *Sentinel:* Pressroom Chairman Paul O. Brannon, pressroom superintendent, Cleveland *Press.*

he said, but takes longer to prepare and to print. Somers was asked what kind of topping is being experimented with on the Imperial Vitaplate. Only Gaco up to the present time, Somers replied. In a further comment, Somers remarked that there is a 5% increase approx. in etching time when using the new Vitaplate compared with etching magnesium when the etching is done at the same temperature. Present experimentation includes raising the etching temperature for the zinc which should cut that 5% considerably. Fred Dirkes of Rolled Plate Metal Co. said his firm's fast etching zinc, Micrometal, etched in linc engravings in about the same length of time as magnesium. The three new fast etching zincs mentioned at the meeting were Edes Manufacturing Co.'s Triple Metal; Atlantic Zinc and Rolled Plate Metal Co.'s Micrometal; and Imperial Type Metal Co.'s Vitaplate.

A. B. Fry of Dow Chemical pointed out in the general discussion that any metal can be etched in the fast etching machines but a royalty must be paid to Dow Chemical Co. if Dow chemistry is used.

William F. (Alex) Alexander, Cleveland (O.) *Press,* said that he had been using all kinds of cold top and found them to be OK for use with the Acme One-Bite Etcher. He made the further comment that his experience with etching depths had been to reach 0.035 in. to 0.038 in. in approx. 16 min. and 0.028 in. in approx. 12 to 14 min. Earl Currise of the South Bend (Ind.) *Tribune* said his experience with the Dow-ANPA fast etching process had been to obtain depths of between 0.004 in. and 0.005 in. on 75 screen engravings on line work in combination flats. C. F. Riedmiller, engraving superintendent, Dayton (O.) *Daily News,* said he had been getting 0.0055 in. depth on 60 to 65 line screens.

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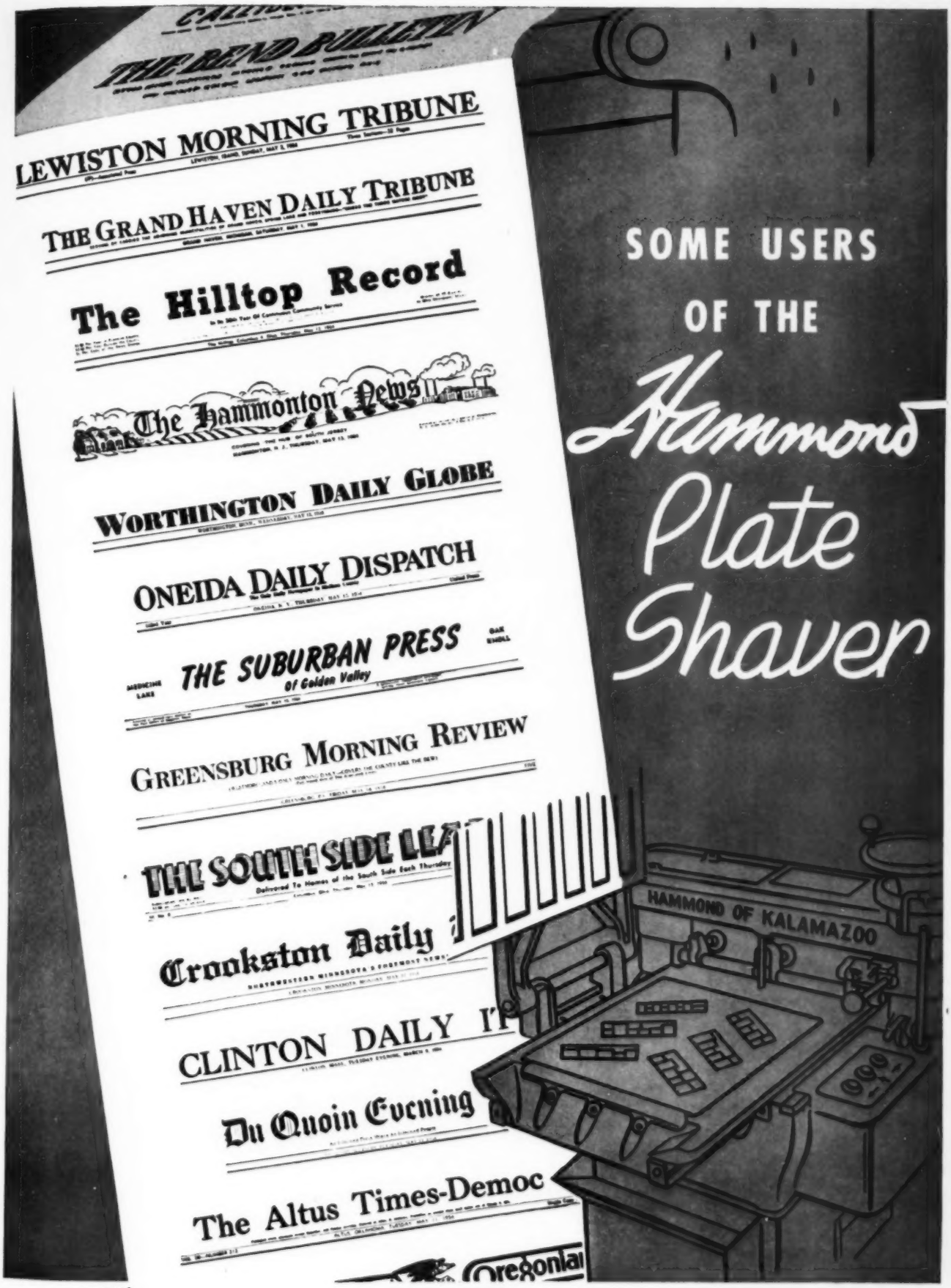
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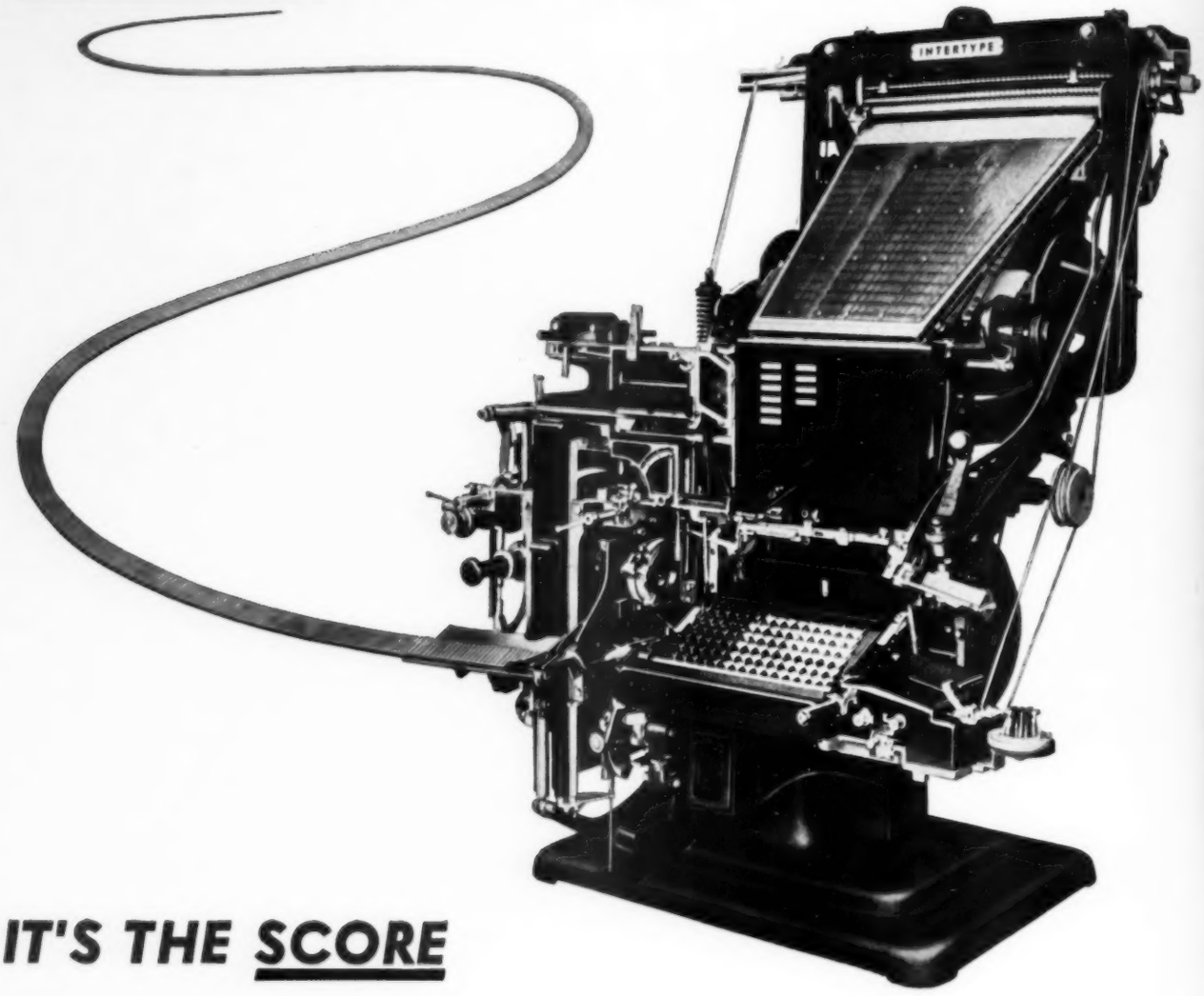

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